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ABSTRACT

This document provides background information on and recommendations for the development of a comprehensive strategy for improving job-related learning in the United States. An introduction discusses the relationship among human resource development, the earnings of individuals, and the productivity of institutions. A summary of the major recommendations for employers, educators, and the government follow. The body of the document is organized into two principal sections. The first consists of three parts that discuss the preparation of workers by institutions outside the workplace. Part I addresses preparation for work through schooling and entry-level job training outside the workplace and provides examples of the foreign experience with the transition from school to work. Part II describes the second chance system, represented by the Job Training Partnership Act. Part III discusses intermediaries--programs and institutions that attempt to expedite the transition for young people and other entry-level workers. The second section of the document discusses learning that is either provided or paid for by employers and employees once people are on the job. Public policies are considered, and foreign experience with upgrading is reviewed. The document concludes with 117 reference notes. (YLB)

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TRAINING AMERICA

STRATEGIES FOR THE NATION

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TRAINING AMERICA
STRATEGIES FOR THE NATION

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PREFACE

This document is intended to provide background information on, and recommendations for, the development of a comprehensive strategy for improving job-related learning in the United States. The work included here is sponsored jointly by the the National Center on Education and the Economy and the American Society for Training and Development. In the interest of individual opportunity and institutional competitiveness, the sponsoring institutions decided to undertake a broad examination of job-related learning in order to integrate the current thinking of public policy makers, educators, and employers concerning strategies to use the nation's human capital effectively. The views included here are solely those of the authors and do not necessarily reflect the policies of the sponsoring institutions.

As representatives of educators and employers, the sponsoring institution's represent a stakeholder in the nation's job-related learning system. Educators and employers all have an interest in the preparation of the nation's workforce, and both have assumed responsibility for various aspects of human resource development in the United States. Both, however, are beset by a mix of economic, demographic, and technological forces that demand a comprehensive strategy to prepare and maintain the workforce, to encourage individual opportunity, and to improve the competitive performance of the economy as a whole.

The diversity in sponsorship for this document is indicative of the diversity in the nation's job-related learning system. Any attempt to formulate strategies to improve the system that does not account for that diversity will miss the mark. The nation's human resource development system is a crazy quilt of institutions with overlapping functions. Each institution has a clear competitive advantage in delivering some aspect of job-related learning, but no institution has an exclusive monopoly on all of its aspects. The lack of clearly demarcated roles in the nation's job-related learning system is complicated further by geographic diversity—every institution is a major provider of learning somewhere, but no institution covers the entire nation.

The essential assumption in this document is that the diversity in the American job-related learning system is a good thing. It allows many points of access for the customers in search of job-related learning—employers and individuals. The current diversity of institutions that supply learning also allows for healthy competition as they respond to emerging education needs. The overall strategy implicit in this document's many recommendations builds on the current diversity and probably encourages more of it. The strategy is to improve the efficiency and quality of job-related learning while simultaneously increasing the demand for it—by putting new buying power in the hands of individuals and employers.

The document begins with an introduction that discusses the relationship between human resource development, the earnings of individuals, and the productivity of institutions. The introduction is followed by a summary of the major recommendations for employers, educators, and the government. The body of the document is organized into two principal parts: a discussion of preparation of workers by institutions outside the workplace and a discussion of learning that is either provided or paid for by employers and employees once people are on the job. Specific recommendations appear as they arise in the discussion. Limitations of time and space have precluded their complete examination, but it is the intent of this document to provide breadth over depth. Indeed, most of the recommendations are drawn from much more extensive research and experience than could be included here. The recommendations are only intended to spur further discussion and study.

●

INTRODUCTION

Education and training on the job have always been the most powerful levers for improving both individual opportunity and institutional competitiveness in the United States. They account for most of the differences among Americans in terms of earnings and the ability to choose how and where to earn a living.[1] On average, learning in school and on the job explains about half the differences in earnings among Americans; geographical considerations, career choices, and plain chance explain the other half. People with the least education and training have the poorest earnings and the fewest choices.

Schooling accounts for about 10 percent of the differences in earnings among Americans.[2] It also determines access to learning on the job: People with the most schooling get the most learning on the job. Learning on the job has a more powerful effect on earnings than previous education, tenure on the job, or union membership. Available data show that people who receive formal training on the job enjoy an earnings advantage of 30 percent or more over people who do not.[3]

Schooling and job training benefit institutions as well. Education and training are critical to the productivity of employers and, therefore, to their competitive advantage. In fact, learning on the job and in school has been, by far, the most important contributor to the growth in the nation's productive capacity in this century. Advances in knowledge on the job accounted for more than half of the increase in our productive capacity between 1929 and 1982. By comparison, formal education was responsible for 26 percent of the increase in productive capacity over the same period. In contrast, the contribution of machine capital was 20 percent.[4] Moreover, the importance of human capital for individual opportunity and institutional competitiveness is increasing as the nation shifts from a machine-based to a knowledge-based economy and as technology becomes ever more footloose in a competitive world economy.

Skill requirements on the job are increasing rapidly. As technology performs more tasks, employers are combining many jobs into fewer jobs with broader responsibilities. These new, consolidated jobs require workers who have broader and deeper skills and use more technology to handle repetitive tasks. The new technology itself requires deeper computational skills for operations, maintenance, and control, as well as higher literacy skills for reading complex manuals. The available evidence tells us that skilled labor and technology are ultimately complementary and not substitutes for one another. There are more educated employees and more on-the-job training where the technical content of work is the highest.[5]

Economic and technical changes are increasing the autonomy of employees and working teams, which also means that employees need more and better job-related skills. Because new technologies perform repetitive tasks, individual employees and working teams have more discretion. Employers are relying increasingly on the technical and interpersonal skills of employees and working teams at the point of production or service delivery to drive efficiency, quality improvements, and new applications for existing products and services. Employees need problem-solving and managerial skills to handle a broad range of functions and teamwork skills to interact effectively with other members of the working team. New technology also allows customization of products, which requires employees with sufficient technical skill to tailor products and services to customers' needs, as well as the interpersonal skills necessary to provide good customer service.

To win the competitive race, American employers will need more skilled workers and institutional structures that can benefit from those workers' ideas. Most innovations come from applying existing theoretical knowledge to the production, testing, and use of existing products and services.[6] Indeed, most new theory comes from the attempt to apply existing theoretical knowledge. The workplace is the primary source of refinements in existing knowledge that lead to product and service improvements and new products.

If work environments are to be effective laboratories, however, they will have to be staffed with personnel who have sufficient skills to push the frontiers of knowledge, and employer institutions will have to value learning and allow individual employees the autonomy to pursue new ideas.

New institutional formats also are increasing skill requirements on the job. As employers create institutional structures that are less hierarchical and more decentralized, resources and authority move toward the point of production and service delivery, for several reasons:

- Employers recognize that new technologies have increased the autonomy of individual employees and working teams and are creating institutional structures consistent with the new reality.

- The technical capability to tailor products and services to customers' needs and to provide high-quality customer service demands institutional formats that give front-line employees the resources and authority to customize products and services and to package a diverse array of offerings for individual consumers.
- Accelerating economic and technical change demands more institutional flexibility than traditional, top-down, hierarchical institutional structures can offer.
- There is a growing need to involve employees at all levels of the organization in order to shorten "cycle time" (the time it takes to get innovations to the marketplace).
- New efficiencies, quality improvements, new applications, and innovations most often come from the production and use of a product or service, which suggests the need for decentralized learning systems at the point of production and sale, as well as at the interface with customers.

In the new institutional environment, employees will need new and better skills not only to perform on the job, but also to get and keep a job. Employers are not only flattening and decentralizing institutional structures to make them more flexible and efficient, but they are also keeping their permanent work forces small. They are making lifetime commitments to a core work force and using suppliers, contractors, and parttimers to respond to temporary needs. As a result, the implicit commitment between employer and employee is in decline. More and more American workers are responsible for their own career development. If they are to shoulder that responsibility successfully, they will need *employability skills*—the skills necessary to get a job—and *career development skills*—the skills necessary to manage a career. They will also need access to job-related training as well as portable pensions, portable health-care, day-care, and parental leave.

Demographic trends in the United States are on a collision course with economic, technical, and organizational changes that demand higher levels of job-related skills. The available labor pool at entry level is shrinking. Moreover, entry-level employees are drawn increasingly from populations in which human capital investments prior to work have been insufficient.

The volatile mix of technical, economic, and demographic forces demands new strategies for developing human resources in the workplace. Employers who used to cream the most qualified from an oversized labor pool increasingly will have to make rather than buy skilled employees.

Those same forces are redefining notions of the role of human resources policies. Policy makers who used to limit their focus to those not sharing in the largess of the American economy are now concerned with the economy itself and the job prospects of all Americans. Many leaders in both the public and private sectors are concerned with the development of human capital as a primary competitive tool in a world where technology and financial capital are footloose. As a result, private human resource strategies and public policies, which previously focused on social policies for the people last in line, now emphasize using human capital development to improve the employment security of all Americans and using people in the nation's institutions more effectively to enhance competitiveness in the world economy. Moreover, in the schoolhouse and the workplace, the target of education and training has expanded to include not only white-collar and technical elites but also noncollege-bound high school graduates and nonsupervisory employees.

The shift in policy goals has engendered corresponding expansion in the appropriate places and means for delivering education and training. The principal expansion has been to add applied learning in work settings to the inductive learning employees learn in schools. The discussion of policy instruments has moved beyond the traditional use of public bureaucracies to supply public education and training to the use of tax-based investment incentives to increase the demand for education and training among individuals and employers.

There has also been a shift in the context of the dialogue on private and public human capital development strategies. The globalization of competition has encouraged a comparison of our human capital development strategies with those of our competitors.[7] Our own assessment is that there is much to learn from our competitors. While the United States does relatively well in preparing white-collar and technical elites in academic settings, both the Europeans and the Japanese are superior to the United States in important respects. Moreover, we agree with other analysts who have concluded that the human capital strategies of the European and Japanese nations have contributed substantially to their economic success. Compared to the United States:

- Learning is accorded a higher standing in the operations of the European and Japanese economies. In both cases, learning is utilized by employer institutions as a proactive tool for responding to strategic change and in the selection and appraisal of, and reward systems for, job seekers and employees.
- Both the Europeans and Japanese provide a higher quality of academic preparation and workplace learning for the noncollege portions of their work forces. As a result, while the United States is good at producing white-collar and technical elites to develop new ideas, the Europeans—the Scandinavians and Germans in particular— are better at getting new ideas to the marketplace quickly, as well as developing cost efficiencies, quality improvements, and new applications over time.
- Both the Europeans and the Japanese emphasize applied learning. The European apprenticeship structure mixes academic and applied learning both in schooling and in the upgrading of employees. While the Japanese schools are very academic in their approach to education, employers provide most of the job-related applied learning for working-age adults.
- Both the Europeans and Japanese have created substantial infrastructures for learning in the workplace. European employers train in partnership with public entities. Japanese employer-based training systems are more informal but are deeply embedded in the cultures of individual employer institutions.
- Partnerships between public educators and employers are much stronger in both Europe and Japan. European employers are a dominant force in the preparation of white-collar and technical elites in the schools and in the apprenticeship system. The Japanese hire on the basis of academic achievement and are very responsive to human capital strategies emanating from quasigovernmental planning institutions.

Many of the recommendations in this document result from an analysis of the relative strengths and weaknesses of American and foreign human capital strategies. A general recommendation is that the United States should emulate many of the strengths of both the European and Asian models. As a result of the comparison of human capital strategies, the recommendations reflect in part the beliefs that—

- learning ought to have a higher standing in the American economy;
- the United States ought to pay more attention to noncollege-bound youth;
- American schooling ought to focus on applied learning; and
- partnerships between public and private entities ought to be encouraged and strengthened.

At the same time, lessons from abroad need to be translated into the American context. For example, the European "dual systems" that direct students into either academic or applied-learning experiences are not sufficiently egalitarian for the American culture. One recommendation is to favor a single track that mixes academic and applied learning for all students but allows them to adjust the mixture to their own needs. In the Japanese case, the commitment of employers to job-related learning is impressive, but the United States ought to favor strategies and policies that give more control of job-related learning to public institutions and individuals.

In addition, the recommendations reflect the conviction that the United States should avoid its competitors' mistakes. For instance, the European model, with its emphasis on occupation-specific learning, can reduce the flexibility of the work force if it is overdone. There is convincing evidence that the European specialization in the mechanical arts through rigorous apprenticeship systems, for example, slowed their shift to electronic-based technologies, which resulted in major market losses to the Japanese.[8]

In addition to those alluded to above, the discussion that follows is based on three pivotal assumptions. First, throughout the postwar era, the human capital development system has made its principal contribution to the nation's economic productivity by increasing the number of Americans who complete high school. The major prospects for further productivity gains are—

- an expansion in both the quantity and the quality of learning after high school—in two-year and four-year schools, and especially in employer institutions; and
- quality improvements in elementary and secondary education, especially among noncollege-bound youths.

Second, an employer-based learning system is the missing link in the nation's human capital development system. Learning on the job is the most critical factor in the career advancement and the competitive performance of individuals. Moreover, until the importance of learning on the job is recognized, human capital development strategies focused outside the workplace will continue to miss the mark. The United States can educate and train employees outside the workplace until it is blue in the face, but if employers do not design institutions and jobs that use and reward learning, all efforts will make little difference.

Third, the job-related learning system recommended here has essential characteristics:

- It would include both a training system to teach new skills and a learning system to capture new knowledge, on and off the job.
- It would be rooted in actual work processes on the job or would simulate applications off the job.
- It would include incentives for stronger linkages between learning on and off the job to accelerate the transfer of new knowledge and changing skill requirements.

In order to build the job-related learning system it needs, the United States will have to use both supply-side strategies to improve the quality of learning inside and outside the workplace and demand-side strategies to encourage individuals and employers to invest in human capital development.

The summary section that follows gives an overview of this document and its general recommendations. Subsequent sections provide a more detailed analysis of policies and programs, as well as specific recommendations.

SUMMARY RECOMMENDATIONS

Employers

Americans need job-specific training to get their jobs, and they need upgrading to keep those jobs and get better ones. They get most of their job-related training from employers. According to a 1985 survey by the Bureau of Labor Statistics, 54 million Americans, 55 percent of the work force, said they received some kind of job-related learning to qualify for their job:

- Twenty-eight million said they got some or all of their qualifying training in school.
- Nine million said they got some or all of their qualifying training from formal courses provided by their employer.
- Twenty-seven million said they got some or all of their qualifying training from informal coaching on the job.

Only 35 percent of working Americans, 34 million people, have received upgrading; mostly paid for or delivered by employers:

- Eleven million have had their skills upgraded in schools. A substantial portion of the cost of this education (roughly 30 percent) was paid for by employers.
- Eleven million have received some or all of their upgrading from formal courses in the workplace.
- Fourteen million have received some or all of their upgrading from informal coaching in the workplace.[9]

A combination of good schooling and learning on the job is ideal for qualifying for a job, getting promoted, and leveraging earnings and job security. As stated earlier, schooling accounts for about 10 percent of the variation in earnings among Americans; the remaining 90 percent is accounted for by career choices and experiences after schooling. Learning on the job, especially formal learning, is the most powerful determinant of earnings. People who get formal learning on the job enjoy a 30 percent earnings advantage over those who do not.[10]

Because of their importance in the nation's job-related learning system, the principal challenge for improving that system is to employers. They currently spend about $30 billion, 1.4 percent of the national payroll, on formal training and development; many large companies spend 2 percent of payroll, and employers with the most substantial commitments to training and development spend 4 percent.[11] Analysis of the available data and case studies of individual employers leads to the conclusion that employers' current commitments to training and development are probably insufficient.

Learning in the workplace is the most powerful lever for improving individual opportunity and institutional competitiveness, and employers are the principal providers of job-related learning—yet learning has a relatively low standing and low frequency in the American workplace. According to the Bureau of Labor Statistics' cited data above, only 11 percent of American employees get formal training and only 14 percent receive informal training from their employers to prepare for their jobs. Only 10 percent received formal training and 14 percent received informal training from their employers to upgrade their skills once they were on the job. Employers spend more than 10 percent of the initial cost of their machinery to maintain it and less than 2 percent to maintain the skills of their employees.[12]

Overall national targets for employer spending could be pegged to the levels of human resource development characteristic of most of the nation's more successful enterprises. In addition, the overall national targets should be increased slowly in two phases:

- an interim target of two percent of payroll nationwide; and
- an ultimate goal of four percent of payroll nationwide.

In addition to increasing resource commitments, employers will need to integrate human resource development into institutional culture and structure. If the critical processes of teaching and learning are to gain more standing in the American workplace, they will have to become part of everyday management and supervision and be connected to performance-based selection, appraisal, rewards, and career-development systems. Managers need to select new employees on the basis of their educational preparation to do the job and to learn on the job. Each appraisal should conclude with a learning plan for improving individual performance. Learning and new ideas should be rewarded. Finally, managers need to advise employees on strategies for using learning to enhance employment security and career advancement.

Moreover, employers will need to decentralize their learning systems, to push the human resource development activity as close as possible to the point of production and service delivery. Because technical changes have their greatest impact on production and service delivery employees, these employees have the most to learn.

By the same token, their immediate experience with the product and the customer make them prime experts and the first listening post for new efficiencies, quality improvements, new applications, and innovations. As a result, they also have much to teach. In the new workplace, the ability to speed an innovation to market requires the full participation of nonsupervisory employees in the design of production and service-delivery systems. Employers need to *teach* employees the skills required for their new, more expanded role. Employers also need to *learn from* the employees who actually make the product, deliver the service, or interact with the customer.

As production and service delivery becomes more decentralized, component parts and critical services are supplied by subcontractors, vendors, and part-time or temporary employees. In order to guarantee the quality of final products and services, employers need to be concerned with the quality of learning systems among suppliers and temporary employees. Employers can encourage higher performance either by providing training or by setting training standards for suppliers and temporary employees.

Four factors are essential to integrating human resource development into the employer institution:

- leadership—the chief executive officer must make training a priority;
- institution building—staff and budget need to be assigned, and the training and development executive must be a full member of the senior management team;
- integration—line managers throughout the institution must be responsible for training and developing their subordinates; and
- accessibility—training must be available to all employees and not just white-collar and technical elites.

American managers will play a critical role in bringing new learning systems into the workplace. In the new workplace, both autonomy and the managerial function have been pushed toward the point of production and service delivery. In the flatter, less hierarchical structures that result, managers enforce accountability less by supervising work processes and more by looking at the outcomes of the efforts of individual employees or working teams. Managers do not direct work processes as much as they help employees improve efficiency and quality, and assist them in the development of new applications. One of the manager's new roles is that of master teacher, responsible for crafting learning experiences for individual employees and working teams to improve work outcomes. The manager also serves as a critical listening post to capture new on-the-job learning from employees that may result in efficiency and quality improvements, as well as new applications for existing technologies, products, and services.

The state of the art in workplace learning far exceeds the state of practice. To bring practice in line with the art, employers need to—

- create an institutional environment that encourages the proactive use of human resource development as a tool to promote efficiencies, quality improvements, new applications, and innovations;
- account for training costs and evaluate training effectiveness; and
- share the costs of basic research on adult learning as well as development and delivery costs of training materials and technologies with other employers, public authorities, educators, and equipment suppliers.

The fundamental pedagogical strength of employer-based training is that it can be applied. Applied learning works better than learning in traditional classroom formats because it embeds new knowledge in a context that is meaningful to the learner. New knowledge delivered in the context of work activities motivates learners and can be put into use immediately. Too often, however, employers do not use their natural pedagogical advantages, but rather transfer the deductive methods characteristic of the schools into the workplace. Employers need to—

- use an applied pedagogy in developing workplace curricula; and
- deliver learning experiences outside the classroom using nontraditional formats.

Every employer also relies on the quality of learning systems in other employer institutions to assure quality of its own final product or service. Therefore, it behooves individual employers to link with other employers to improve the performance of the network of learning systems.

Employers also need to link with external education and training institutions in order to guarantee a supply of educated entry-level employees and to assure a supply of high-quality upgrading training for existing employees should employers want to buy rather than provide training internally.

It is in the interest of all the employers to assure efficient and timely learning of new skills and to absorb new knowledge as quickly as possible. Strong linkages among employers in the same economic networks and between employers and external education, training, and R&D institutions can accelerate the transfer of learning to everyone's advantage.

Educators

Employers rely on the education system for the building blocks of a competitive work force: entry-level employees who are job-ready and training-ready. Educators provide most of the training employers buy from outside sources in order to upgrade employees. Therefore, we urge educators to—

- work with employers to strengthen the link between learning in school and learning on the job;
- link the teaching of academic subjects to real-world applications; and
- teach future employees not only reading, writing, and arithmetic, but how to make decisions, to solve problems, to learn, to think a job through from start to finish, and to get a job done with and through other people.

The half of high school graduates who do not go on to postsecondary education require special attention. As mentioned earlier, the United States is competitive in the educational preparation of white-collar and technical professionals, but is less than competitive at providing basic education and occupational training to noncollege-bound youth. Eventually, those youths become the nation's hands-on production and service-delivery employees and have substantial control over the efficiency, quality, and development of new applications for products and services. As new technologies and decentralized organizational structures increase skill requirements, those youths will become ever more critical to the nation's competitiveness. Therefore, their educational preparation will increase in importance. The 43 percent of American high school students who are in the watered-down general curriculum, and the 19 percent who are in vocational courses, need a new curriculum that mixes solid academic basics and applied learning, preferably in work settings.

To get the most out of the nation's human capital, employers and educators will have to become more closely linked and accountable to one another. If the nation's educators become more accountable to employers, employers will give more weight to educational preparation in making hiring decisions, which will encourage students to take schooling more seriously. The schools should—

- involve employers in curriculum development; and
- develop transcripts that record students' cognitive and interpersonal skills.

The nation's educators also need to be more accountable to students. Educators cannot meet their clear responsibility to prepare an independent citizenry if they do not provide students with the skills necessary to guarantee economic independence for themselves. Toward that end, the schools should—

- develop curricula that prepare students for performance in the world of work;
- use applied learning to facilitate students' ability to use academic learning on the job; and
- encourage "learning-and-earning" programs that mix developmental work experiences with academic learning.

Accountability between schools and employers is a two-way street. To be full partners in American education, employers must—

- communicate new knowledge and changing skill requirements as they arise in the workplace;
- give more weight to educational attainment and achievement in hiring decisions; and
- work with educators to develop and provide "learning-and-earning" curricula.

Government

There are three main thrusts in the government's efforts to improve the nation's job-related learning system. First, the scope of the government's human resources strategy needs to be expanded. The strategy should include both social-policy goals and economic-policy goals, use human capital development to promote individual opportunity and institutional competitiveness, target both disadvantaged and working Americans, and deliver human capital development both outside and inside the workplace.

Second, government policies should encourage better use of scarce resources, including the coordination of existing programs at the point of delivery and closer links among the nation's providers of human capital development.

Third, the government should pursue both supply-side strategies that improve the capacity of institutions to provide education and training, and demand-side strategies that encourage employers and individuals to invest more resources in education and training.

The disadvantaged have the first claim on public attention and public resources. The nation is already past due on its commitment to provide equal opportunity for participation in the American culture, polity, and economy. The litmus test of that commitment is willingness to provide public resources to make every American capable of getting and holding a job, because people unable to get work disappear from the community, drop out of the political system, and fall into the underground economy.

Providing human capital development for the disadvantaged would do more than honor commitments to equal opportunity. It would also pay off in dollars and cents. Investments that endow the disadvantaged with the necessary skills to make them economically independent will reduce the costs of public dependency. In addition, with the decline in the number of entry-level workers, the nation now needs all its young people on the job to remain economically competitive.

Preparing the disadvantaged for jobs with a future will require a mix of family support, basic education, and job training. Programs should be predicated on the principles that the best social welfare agency is a family, the best educator is experience, and the best trainer is a job. A program to provide a real second chance for the disadvantaged would include—

- prenatal care and sound nutrition in their early years, preschool education, compensatory education for educationally disadvantaged elementary and secondary students, and training and transitional services to leverage entrance into the workplace; and
- a cohesive delivery system allowing them one-stop shopping for a customized mix of services suited to their developmental needs.

Experienced employees who become unemployed after several years on the job also have a high-priority claim on federal resources. The same destructive processes are at work for the dislocated as for the disadvantaged. The disadvantaged tend to start out and end up at the bottom of the economic heap. The dislocated experience an economic loss that rarely results in persistent poverty but probably involves an equal amount of suffering—not so much because of where they land as because of how far they have to fall. There is no fit measure to guide a choice to help one group and not the other.

Dislocation is here to stay. The harsh reality is that a fair trading system and new technology will inevitably benefit the nation as a whole but harm some individual citizens. In the end, practical necessity and compassion suggest the need for dislocation policies.

Such policies for the dislocated are not expensive. The billion dollars the Lovell Commission informally agreed ought to be spent on worker dislocation should be sufficient new money to pay for effective programs to serve the roughly one million experienced American employees who are dislocated each year.[13] In addition, current proposals for expanding the uses of the $30 billion unemployment insurance system beyond its current emphasis on income maintenance are worthy of consideration. There are three principles to follow in crafting programs for the dislocated:

- Set a higher hitch in the safety net for dislocated employees. The government should help dislocated employees avoid a free-fall from middle-class status to official poverty.

- Help employees before they become dislocated. Prior notification, counseling, job-search assistance, and outplacement should be encouraged while employees are still on the job.
- Above all, help dislocated employees find jobs. Give dislocated employees counseling and job-search assistance before giving them training. Training outside the context of a job or job commitment is usually folly. Training does not create jobs; jobs create the need for training.

Although demographic and economic trends suggest urgency in addressing the education and training needs of the traditional public clientele—the disadvantaged and dislocated—those trends also suggest that the mass of mainstream employees and employers are now appropriate targets of public education and training policy. Trends in the workplace suggest that the need for flexible institutions will reduce the commitment between employer and employee, forcing employees to take more responsibility for their own career development. If they are to do so successfully, they will require new tools, including portable health-care, portable pensions, day-care, parental leave, and access to job-related training. A policy to improve access to training for adult Americans should include two components:

- giving individuals direct control over their career development by providing them loans they can cash in with employers or other education and training providers; and
- using institutions outside government and industry, such as unions and professional, occupational, and trade associations, to develop standards, training, and internship/apprenticeship experiences in particular occupations.

The growing concern with the nation's economic competitiveness has resulted in a relatively new public interest in the quantity and quality of the nation's employer-based training. Learning on the job is the primary factor promoting productivity and new learning that eventually translates into competitive products and services, yet policies to encourage employer-based training are conspicuously absent in the nation's investment portfolio.

In addition, the absence of learning infrastructure on the job is the missing link in the partnership between schools and employers. To the extent learning is embedded in the economy, the economic importance and the leverage of preemployment education and training will increase. To the extent learning becomes more connected to job performance and economic rewards in the economy, students and trainees will be more interested in their own development. Moreover, to the extent employers rely on training as a strategic tool, partnerships will be strengthened between employers and the education and training community outside the workplace. Employers will be more interested in well-prepared, entry-level employees who are ready to be trained. Employers who upgrade their employees more will find more use for external educational and training institutions. Large employers already buy 30 percent of their upgrading training, more than $10 billion worth, from outside suppliers. Smaller employers buy almost all their training from outside resources. The ideal device for expanding employer training—homemade and bought—would be some form of investment incentive for employers to increase their spending on training. Some proposals are—

- establishing incentives for employers to provide more training—ideally, incentives delivered through the tax code;
- encouraging state-based policies to provide incentives for employers to make or buy training for their own employees;
- encouraging state-based policies to provide customized training for employers;
- encouraging basic R&D as well as inventory, analysis, and dissemination of best practices in workplace training; and
- developing workplace curricula in training areas with high priority.

PART I

PREPARING FOR WORK

Schooling

In 1985, 28.1 million workers (about 30 percent of the American work force) reported they had received some or all of their qualifying training from schools. Most (about 16.1 million workers) got their qualifying training from four-year postsecondary institutions. About five million got their jobs as a result of training in junior colleges or technical institutes. Another five million got some or all of their qualifying training in high school vocational education courses. Roughly two million qualified for their jobs as a result of training in private postsecondary vocational schools, and 1.5 million qualified as a result of training in public postsecondary vocational schools.[14]

The cost of schooling is high: Expenditures for public elementary and secondary schools totaled $137 billion for the 1985–86 school year and is estimated to reach nearly $156 billion for 1987–88.[15] Although federal funding for elementary and secondary education is overshadowed by the contributions of state and local governments, which together accounted for about 93 percent of all funding in 1984–85, the federal government proposed to spend a whopping $11.5 billion for educational programs in fiscal year (FY) 1988, including $5.1 billion for elementary and secondary school programming.[16]

That huge public investment in education has had some gratifying results. High school graduates account for 86 percent of young adults aged 25 to 29, twice the percentage for 1940. As of October 1985, 86.5 percent of whites, 82.5 percent of blacks, and 70 percent of Hispanics had received a high school education. The annual dropout rate fell from 6.3 percent in 1973 to 5.2 percent in 1983, with young black men showing the most improvement.

Twenty-two percent of all 25-to-29-year-olds have completed four years of college, nearly double the figure for 1963 and four times the percentage in 1940. The gains have been especially dramatic for blacks; the proportion of college graduates among blacks has risen sevenfold since 1940.

Nevertheless, considerable educational attainment gaps remain. Black and Hispanic teenagers are far more likely to leave school before graduating than white youths; and poor youths, regardless of race or ethnic group, are three to four times more likely to drop out than students from higher income families. In 1985, only 56 percent of black and 53 percent of white 18-to-21-year-olds from poor families had earned a high school degree. Hispanics at all economic levels are especially at risk for leaving school early, but the dropout rate is only marginally higher for nonpoor black youths than for nonpoor white youths.[17]

Even as dropout rates have diminished, however, the quality of education all young people currently receive in secondary schools has become a major national concern. In a nationwide opinion poll conducted for *Newsweek* magazine by The Gallup Organization in the spring of 1981, nearly half the respondents rated the job that public schools are doing as poor or only fair, and almost 70 percent called for more emphasis on academic basics.[18] The National Commission on Excellence in Education underscored this concern in its report *A Nation at Risk* (1983), which warned dramatically that the educational foundations of American society are presently being eroded by a rising tide of mediocrity that threatens the very future of the nation and its people.[19]

Educational reform, especially at the secondary level, has become a top priority for politicians and policy makers concerned about national competitiveness. In general, reforms have stressed increasing the emphasis on basic skills (reading, mathematics, and the sciences), improving the quality of teaching, and testing both teachers and students to determine their levels of competence.

Many of the reform proposals also focus on the institutional structure of American education. In general, reformers agree that resources and authority in educational institutions ought to be concentrated at the point of service delivery—the classroom. That view is consistent with institutional-reform models currently prevalent throughout the public and private economy. The roots of the models lie in the general recognition that new information-based technologies have increased the autonomy of employees at the point of production and service delivery; the presumption is that employees at the point of production or service delivery have substantial control over efficiency, quality, and innovation. The upshot is a reform model, currently in vogue across all American institutions, that—

- gives autonomy and resources to individuals and teams at the point of production and point of sale;
- flattens institutional hierarchies to improve vertical integration; and
- maintains accountability by measuring the outcomes of work rather than by managing work processes.

The "accountability" issue has been the most difficult component of the model to embed in the delivery of public services. Unbiased tests of service quality are hard to come by. Moreover, the public sector has historically been accountable only for providing access to public services, not for guaranteeing their quality. For instance, our legal system guarantees "due process" but does not guarantee quality representation or justice served. Similarly, our education system guarantees a certain number of years of public education but does not guarantee quality education. While it is impossible to guarantee justice in the legal system, it is possible to improve accountability standards in other public services, particularly education.

A third thread that shows up in the complex weave of educational reform is general agreement that we need to encourage more professionalism among teachers, so that they can use the increased autonomy they are likely to receive. Most proposals suggest greater subject-matter expertise and a more defined hierarchy in the teaching profession based on preparation and proven competence. Reformers tend to agree that we need a structure that separates and utilizes novice, journeyman, and master teachers in the same way we develop and utilize labor in the craft occupations. In addition, they agree that teaching is an applied discipline much like the clinical practices in medicine. As a result, they argue for more professional development on the job or in simulated classroom settings.

More than most professionals, teachers rely on schooling rather than on applied learning on the job for their qualifying preparation and upgrading. Only four percent of teachers report any formal training at the worksite to qualify for their jobs and only nine percent report any formal upgrading on the job. By way of comparison, professionals who receive formal training on the job to qualify at the entry level runs as high as 40 percent of the work force among sales occupations, 15 percent among health occupations, 30 percent among scientists, and 15 percent among engineers. Upgrading on the job is also substantially higher in other occupations. Almost a third of the nation's managers, engineers, and scientists, as well as a quarter of the nation's nurses, therapists, and pharmacists get some formal upgrading on the job.[20]

Recommendation #1: To improve the quality of American education, schools should give teachers the autonomy and resources they need, provide professional development on the job, and measure the learning outcomes of their work.

Basic Workplace Skills

Students need to learn two kinds of skills as they prepare for work: basic skills that prepare them for working life and specific skills that allow them to perform in particular occupations. Traditionally, basic skills have included the three Rs—reading, writing, and arithmetic. In recent years, however, employers have demanded a broader array of skills of their employees, as well as better preparation in the traditional academic basics, as a result of economic and technical changes.[21]

Technical changes on the job tend to change basic skill requirements incrementally. Sometimes those changes accumulate to the point of creating entirely new occupations. In manufacturing, craft occupations, such as machinist and tool-and-die maker, are evolving quickly into jobs for technicians and technologists. The same has happened with the skill jobs of the assembler, repair person, and materials handler. In services, the secretary is evolving into the information manager, and the bank teller is becoming the financial services portfolio consultant.

Technology is the means to product diversification, in order to keep pace with the development, design, production, and sale of changed and new products, employees will need greater job-specific product knowledge. Also, to perform successfully in this situation, employees must know how to learn. Recent diversification has expanded skill requirements in the communication and banking industries, for example. In the communications industry, a basic line of voice instruments has expanded into a myriad of systems for communicating data and imagery. In the banking industry, the basic line of checking and savings products has grown into an array of financial services.

New information technologies also make it possible to customize products. Over the past decade, both batch production in manufacturing and the customization of services have advanced markedly. The ability to tailor products and services requires the learning and problem-solving skills that make employees adaptable. And with customization comes the need for customer relations: Employees at the point of production and service delivery must know how to listen and to articulate their thoughts clearly—to understand and be understood. In addition to strong communication skills, they need interpersonal and negotiation skills to deal with customers' complaints.

Changing economic and technical realities are altering institutional structures, and those new structures, in turn, are changing basic skill requirements. Information-based technologies are decentralizing institutions and thereby increasing the autonomy and value of employees at the point of production and service delivery. At all organizational levels the roles of personnel have expanded, and with those broader roles comes greater opportunity to have a positive or negative effect on efficiency, quality, and innovation.

In the new, decentralized institution, resources and authority are available to lower-level employees. The middle layers of management are gone, and the institutional hierarchy is flattened; those changes reduce the gap between people responsible for institutional leadership, product development, and strategic decision-making and those responsible for production and service delivery.

Employees in those new institutions need high levels of basic skills. They must have personal management skills to maintain self-esteem, set goals, and be motivated. To participate as full members of autonomous working teams, they need high levels of interpersonal, teamwork, negotiation, and organizational skills—skills that enhance group effectiveness—as well as leadership skills. To be effective in the organization, employees must understand how their personal goals and objectives fit into the organization's culture and strategic goals. With this understanding, employees can influence the organization to use and develop their skills in a mutually productive way.

As economic and technological changes occur, the new, flexible institution will continue to modify and rebuild itself. In turn, individuals will have to adapt skills for new roles within it. But as it constantly changes form, its commitment to individual employees declines, so employees rely more on skill development than on any one employer for job security and career development. To take charge of their own working lives, employees need personal management and career development skills.

A work force with sound basic skills will strengthen its employer's ability to compete. And for the individual worker, basic skills are the keys to improving opportunity and quality of life. Workers with good basic skills find it easier to acquire sophisticated skills that can give them better jobs and higher pay.

The relationship between basic skills and opportunity seems to be strengthening over time. According to Sum and Berlin, while inflation and declining productivity reduced the earnings of all Americans between 1960 and 1984, the earnings of the least educated declined the most. During the last recessionary period, high school dropouts experienced a staggering 40-percent decline in earnings, but the earnings of workers with high school diplomas, some college education, and college degrees declined by 30 percent, 26 percent, and 11 percent, respectively. The difference in earnings between high school graduates and dropouts increased from 30 percent to 60 percent.[22]

Available evidence also shows that, although employers do not fully reward employees for their basic skills, there is some correlation between abilities and rewards.[23] When Sum and Berlin analyzed the earnings of young workers who had taken the Armed Forces Qualifying Test, they discovered large differences in earnings among people with the same number of years in school but different levels of basic skills. Dropouts who had scored low on the test earned only half as much as dropouts with higher scores. Among high school graduates, males with the better basic skills earn two-thirds more than dropouts and females who scored low earned three times more than their counterparts who scored low.

Deficiency in basic skills stands as the final barrier to employment of the poor and disadvantaged. The current scarcity of entry-level labor offers steady work to those prepared for jobs. Basic skill deficiencies are also among the principal causes of the social pathology that torments the poor. In a survey of disadvantaged 19-to-23-year-olds, Sum and Berlin found that among economically disadvantaged youth with low basic skills, 68 percent had been arrested, 85 percent were unwed mothers, 79 percent were welfare dependents, 85 percent were dropouts, and 72 percent were unemployed.[24]

In conclusion, the requirements for basic skills have increased dramatically in the modern workplace. The old-time religion—reading, writing, and arithmetic—is not enough. Modern labor markets require a broader set of basic skills for employment security and success on the job than did previous markets.

Recommendation #2: Institutions that prepare Americans for work, especially the nation's schools, should provide basic preparation in the following skill areas:[25]

- **the foundation—knowing how to learn;**
- **academic competencies—reading, writing, and computation;**
- **communication—listening and speaking;**
- **adaptability—creative thinking and problem solving;**
- **personal management—self-esteem, goal-setting and motivation, and personal and career development;**
- **group effectiveness—interpersonal skills, negotiation, and teamwork; and**
- **influence—organizational effectiveness and leadership.**

Applied Learning

Many education reformers are concerned not only with what is taught in the schools, but also with how the teaching is done. Current teaching methods are passive: Students, working in isolation from one another, are told what they need to know and are rewarded for parroting what they have heard. Teachers deliver information using theoretical or deductive formats that bear little relationship to real-world contexts.

Such teaching methods contrast sharply with the way people use knowledge and learn on the job. In the workplace, employees are asked to engage actively in their environments and are members of working teams. Knowledge is useless without communication skills to transfer it to others and interpersonal skills to work with a team. Also, intellectual activity almost always occurs in conjunction with the use of tools of one kind or another, and there are problems to be solved rather than questions to be answered.

Employers have long been advocates of an applied pedagogy. They argue that learning that occurs in some functional context produces better students as well as better employees. Learning in an applied context forces students to integrate interdisciplinary knowledge because the real world rarely fits into neat academic categories. Applied learning also lends itself to exercises that encourage the use of new knowledge to solve problems. Problem-solving exercises are amenable to group interactions, engaging individual students' cognitive, interpersonal, teamwork, and organizational skills. Moreover, applied exercises, especially if done in groups, allow individuals to clarify their own values, gain a sense of their own identity and their impact on others, and develop an appreciation for other people's values, abilities, and problem-solving styles. Applied learning is arguably a more effective pedagogy than traditional classroom techniques because it encourages students' involvement and retention of information. Using knowledge forces a deeper understanding than parroting knowledge. Also, learning delivered in a context of interest to students stimulates their interest. Learning that is used in a real-world context, especially one that is encountered in the everyday life of the students, is likely to be retained and used.

Recently, education researchers have begun to see the disadvantages of current teaching methods. Lauren Resnick, President of the American Education Research Association, in her 1987 annual address to education researchers, expressed her concern that school tends to be "disconnected from real life." She concluded, "The evidence is growing that schooling may not contribute in a direct and obvious way to performance outside school. Schooling is coming to look more isolated from the rest of what we do."[26]

Sylvia Scribner of the City University of New York has done pioneering work in cognitive psychology suggesting that learning by doing and learning through isolated mental activity are equally powerful learning modes, regardless of the subject matter. According to Scribner:

> "Execution has its mental as well as manual components, and . . . mental and motor processes may substitute for each other. We might say that in certain circumstances, operations of the head and of the hand are functionally equivalent."[27]

The National Assessment of Educational Progress, in its assessment of the performance of young Americans, found that young people have difficulty using what they know. In an assessment of reading abilities, for example, the researchers concluded, "Evidently, the printed word usually can be decoded, but the information obtained is not processed correctly to solve problems."[28] Similarly, in their assessment of mathematical abilities, the research team concluded—

> "Students who enjoy mathematics and perceive its relevance to everyday life tend to have higher proficiency. Most [students] perceive that the subject is composed mostly of rule memorization and expect to have little use for mathematical skills in their future lives."[29]
>
> "Mathematics instruction continues to be dominated by teacher explanations. More innovative forms of instruction—such as projects involving small group activities, laboratory work, and special projects—remain disappointingly rare."[30]

Recommendation #3: Insofar as possible, education should be delivered in an applied context. More specifically—
- **learning and performance evaluation should be focused on groups as well as individuals; and**
- **pure reasoning should be deemphasized in favor of learning experiences that imitate real-world situations and involve physically manipulating objects and tools.**

The Value of Work Experience

At least one-third of all high school students hold year-round part-time jobs. Two-thirds of high school students work some time during the year. Further, the proportion of students who work is on the rise. Sixteen-year-old males are five times as likely to be working today as they were in the 1940s. Sixteen-year-old females are 16 times as likely to be working as their pre-World War II counterparts.[31] It is no wonder that a major question facing school reformers at the secondary level is the relative value of academic and applied learning. Much of the debate over school reform has centered on the need to increase the quantity of academic learning in the classroom. The National Commission on Excellence in Education, the Carnegie Commission, and other prestigious bodies have all recommended strengthening classroom teaching, increasing academic study loads, lengthening the school day, and requiring more homework. The more applied versions of public education, especially vocational education, are consistently criticized for their lack of academic content.

In addition, work experience outside the classroom has received mixed reviews.[32] That is not surprising. Who would suppose that experience in low-end jobs that have little to do with career goals would encourage learning in school or develop good work habits? On the other hand, work that is structured as a learning experience and integrated into a complementary academic program at school would increase both learning and self-esteem substantially. First, such programs would reduce the isolation of academic and vocational students from the real world. It may have been necessary to warehouse the oversized baby boom in the schools during the 1970s, but it is neither advisable nor necessary to do the same with the current, smaller population. Second, as already explained, applied learning is good pedagogy. It allows students to learn at their own pace. Also, they quickly learn appropriate dress, punctuality, reliability, and other work skills from their fellow employees. They are motivated to learn on the job because increased proficiency brings immediate rewards, in terms of achievement, status, and earnings. Finally, many young people need to earn and learn at the same time to support themselves and fulfill their family responsibilities.

Programs that mix academic and workplace learning are more characteristic of European educational systems than the American system (see last section in Part I). There are exceptions in the American system, however, including a crazy quilt of internships and work-study programs. About 10 percent of vocational students and about 2.5 percent of all students are involved in cooperative education arrangements.[33] In contrast to vocational education, which teaches occupational skills in a classroom setting, cooperative education offers a combination of classroom instruction and paid or unpaid work experience. Cooperative studies are designed to fit the occupational interests of students as closely as possible, although most frequently the work is in fields related to wholesale or retail trade.

These kinds of programs are often criticized because they track students into occupations and income strata that limit opportunity. Yet the mix of academic and applied learning could be structured carefully to allow for upward mobility and easy transitions between the workplace and academic settings. For instance, a student could spend two days each week in school and three days in the workplace learning to become a precision production worker. Subsequently, work experience and on-the-job training could qualify that person for a technician training program at a junior college. Later, the same worker could enroll in a manufacturing engineering program in a four-year school after demonstrating knowledge gained on the job.

Whether or not the education system can be rebuilt to provide alternative academic and applied learning tracks leading to accredited learning, it is clear that young people will continue to combine schooling and work. Educators and employers should, at least, ensure that work provides some developmental benefits and, at best, carefully integrate the two kinds of learning experiences.

Recommendation #4: Schools, parents, and employers should work together to provide students opportunities to earn and learn at the same time by participating in work experiences that are carefully selected and structured to complement academic programs. A student work experience experimentation and demonstration project should be established by an act modeled on the Youth Employment and Demonstration Project Act (YEDPA) of 1977. The act would authorize research, evaluation, and demonstration activities to increase understanding of work experience while students are in school and improve current practices.[34]

The Economic Payoff of Schooling

One of the problematic issues in educational reform efforts concerns the difficulty of motivating young people to study and to learn. Some critics of proposals to toughen educational requirements have suggested that one result of strict requirements will be to increase dropout rates among marginal students. Despite the public perception that doing well in high school will result in higher-paying jobs, and despite employers' statements that solid basic skills and good work habits are important to them, recent research indicates that the reality is quite different. Many people argue that, in fact, the labor market as it presently operates does not reward workers who have good basic skills with higher wages than other workers.

In two provocative and well-researched papers, Bishop examined the evidence gathered by economists and industrial psychologists on the relationship between productivity and basic skills. He found that "in a variety of jobs, basic skills are indeed very important to productivity, and the effect comes primarily from the contribution of basic skills to quick acquisition of job-specific skills."[35] High academic achievers tend to learn new job tasks more quickly and to be more productive in all jobs than low academic achievers, but the effect is especially large in jobs that demand high intellectual skills. In entry-level jobs that have a large proportion of recent high school graduates—clerical and semiskilled blue-collar jobs—there are also high correlations between academic achievement and basic skills. In clerical jobs, for example, employees who scored 510 or higher on both the math and the verbal parts of the Scholastic Aptitude Test (SAT) made a 15 to 20 percent greater contribution to output at their firm than employees scoring below 400.[36]

Nevertheless, Bishop made the equally important finding that employers do not reward high academic achievers with high wage rates. Indeed, a 110-point increase on both the math and the verbal parts of the SAT "does not result in higher wage rates immediately after graduation and increases the earnings of high school graduates 10 to 30 years after graduation by less than 10 percent."[37]

There are two significant reasons for that finding. First, wage rates are typically determined by the type of job and not an individual's productivity on the job. Second, most employers rely on unstructured job interviews to hire for entry-level positions. Court decisions involving equal employment opportunity and the reluctance of school personnel to make confidential recommendations or to release high school records make it difficult for employers to acquire specific information about applicants' skill levels. Thus, unless high academic achievers are able to indicate by their general deportment, responses to interview questions, or other external clues (such as neatness of dress) that they have higher-than-average basic skills, employers will give them no immediate reward for their achievements.[38]

Bishop concluded that working hard and achieving in school benefit the employer more than the student and that "employers are contributing unwittingly to the basic skills deficits that they complain about by not screening job applicants carefully for basic skills and then offering better jobs to those who have a solid foundation in basic skills."[39]

Bishop and others assert that the fundamental problem is that learning has insufficient standing in the American workplace. Until academic performance matters more in hiring decisions, students will have little economic incentive to stay in school or do well in their classes. The emerging shortage of 16-to-24-year-olds may be an opportunity to strengthen the relationship between hiring and educational achievement.

School records could become an important sorting device for employers faced with a declining quantity and quality of entry-level job applicants, if the schools develop curricula and accountability measures that will give employers confidence in the relevance of schooling to the job.

Recommendation #5: American employers should work with the schools to help develop curricula that are relevant to job performance and should weigh educational achievement more heavily in the hiring process than they do now.

Recommendation #6: The nation's educators need to provide employers with records that assess academic performance and behavioral attributes of students.

Entry-Level Job Training Outside the Workplace

Only 55 percent of Americans receive education and training that prepare them for a specific job, although the frequency of qualifying training varies by occupation (see Table 1). Roughly two-thirds to three-quarters of all professionals, technicians, managers, and high-tech manufacturing and craft workers get some kind of education or on-the-job training for their jobs. Slightly better than half of the employees in clerical and extractive jobs get any preparation for their jobs. Just over a third of machine operators, transportation workers, service workers, and sales workers have qualifying training, as do 18 percent of laborers.

Most Americans learn what they need to know to get their jobs through a mix of schooling and employer-provided learning. Apprenticeship, the military, and other institutions also play an important role in providing training to help Americans qualify for specific jobs. As Table 1 shows, professionals, technicians, managers, and management-support specialists get a substantial share of their preparation for work from school. The workplace is the primary venue for qualifying training in the remainder of the work force. This section discusses each of the major providers other than employers and provides recommendations for improving the quality and frequency of job-related education and training outside the workplace.

Job Training in High Schools

As stated previously, the United States is good at preparing white-collar and technical professionals. American engineers, scientists, professionals, and managers are second to none. The elementary and secondary schools and the majority of postsecondary educational resources are geared to the educational needs of these groups. All too often, however, that concentration on academic elites leads to ignoring students who are not college-bound. Ultimately, those are the students who will become skilled technicians, clerical workers, machine operators, and service workers. In most cases, they will be the people who will make the products and deliver the services. As already explained, they are increasingly important in the workplace for developing efficiencies, making quality improvements, developing new applications, tailoring products and services to specific customers' needs, and maintaining the quality of customer contact. In short, these nonsupervisory employees are increasingly important to the competitiveness of individual employers and the nation as a whole. Yet they get the least educational preparation and, as a result, have the fewest opportunities. The quality of education available to general and vocational education students, who make up about 61 percent of the high school student population, is a particular concern among education reformers.

In *The Neglected Majority*, Dale Parnell, President and Chief Executive Officer of the American Association of Community and Junior Colleges, addressed the

TABLE 1

SOURCES OF QUALIFYING TRAINING (PERCENTAGE OF OCCUPATIONAL GROUP)

Occupational Group	Total with Qualifying Training	From School	Employer-Based	
			Formal	Informal
All employees	55	29	10	26
Professionals	93	82	9	22
Technicians	85	58	14	32
Management-support specialists	77	52	11	38
General managers	71	43	12	39
Craft workers	66	11	16	44
High-tech manufacturing workers	61	17	15	38
Clerical workers	57	33	7	31
Extractive workers	56	4	13	48
Sales workers	43	15	12	28
Machine operators	37	6	6	26
Service workers	36	13	9	18
Transportation workers	36	2	8	26
Laborers	18	2	2	13

Note: For some occupational groups, the percentages add up to more than the total because some employees received training from more than one kind of source.

Source: Carey, Max. Bureau of Labor Statistics, U.S. Department of Labor, *How Workers Get Their Training* (Washington, DC: U.S. Government Printing Office, 1985).

issue of quality and relevance of today's high school instruction for the average noncollege-bound student, who as an adult worker will be called upon to provide the middle range of technical skills. Parnell challenged educators to consider how the ordinary student can experience excellence in his or her high school education. He noted that most high schools have a system—sometimes acknowledged, sometimes not—that "tracks" students into academic (college-bound), vocational, and general paths. Although the general track was once small, by 1981 it had become the chosen path of 42 percent of all students; 36 percent of the students were on the academic track; and 19 percent on the vocational track.

General students typically receive a combination of general, remedial, and personal or hobby courses ("potluck in the schoolhouse"), and although 15 percent of their school credits are in vocational education courses, generally these courses are not concentrated in a particular trade or occupation. Nearly half of all general students' credits are in physical education, arts and crafts, home economics, and work experience. With such an unfocused and generalized curriculum, it is not surprising that 63 percent of high school dropouts come from the general education track, compared with only six percent from the academic track and 29 percent from the vocational program.

Parnell argued strongly for developing a "careers education" (not to be confused with vocational or career education) that combines academic, vocational, and general studies into a comprehensive program to help the student develop all the competencies necessary to fulfill the roles of learner, wage earner, citizen, consumer, family member, leisure-time pursuer, and individual. Such a program would prepare the student for continuing training and education.

More specifically, Parnell suggested a curriculum system offering three majors: a college preparatory major for students who will later pursue a baccalaureate degree; a technical preparation major for students who will later pursue an associate degree; and a vocational cluster major for students who will enter the work force after graduation.

All three majors would include a common core of learning, including communication skills, social sciences, mathematics, the physical and biological sciences (tailored for each major), and physical education.[40]

According to the Bureau of Labor Statistics, about five percent of American workers in 1985 had received some or all of their qualifying training from high school vocational education. Table 2 shows that high school vocational education is an important source of training for some kinds of workers, but not others. More than a third of the nation's secretaries and typists and a quarter of the people in drafting jobs reported taking vocational courses in high school to prepare for their jobs.

TABLE 2

SOURCES OF VOCATIONAL TRAINING (PERCENTAGE OF OCCUPATIONAL GROUP)

Occupational Group	High School	Postsecondary Vocational School		Junior College or Technical Institute	College
		Public	Private		
Hairdressers and cosmetologists	7.0	10.8	45.0	12.3	0.0
Secretaries	35.1	3.8	6.1	14.1	7.1
Typists	36.1	2.8	2.4	7.4	0.0
Registered nurses	0.0	3.4	14.0	28.9	45.4
Licensed practical nurses	0.0	24.5	12.5	33.7	0.0
Real estate salespersons	0.0	5.1	11.1	23.3	0.0
Barbers	0.0	15.7	30.8	0.0	0.0
Radiologic technicians	0.0	0.0	18.6	39.0	0.0
Electricians	9.3	5.9	3.3	8.2	0.0
Computer operators	11.4	0.0	4.0	14.8	0.0
Computer programmers	0.0	3.7	0.0	18.5	39.6
Electronic technicians	0.0	0.0	8.7	25.3	0.0
Drafters	24.9	6.4	0.0	22.0	0.0
Automobile mechanics	12.8	4.2	3.1	7.0	0.0

Source: Carey, Max. Bureau of Labor Statistics, U.S. Department of Labor, *How Workers Get Their Training* (Washington, DC: U.S. Government Printing Office, 1985).

Although high school vocational programs are designed to help ease the transition from school to work, one review of research on the outcomes of these programs, prepared for the National Commission for Education Policy (NCEP) in 1979, found no evidence that males who enroll in vocational training programs do better in the labor market or are less likely to drop out of high school than other male students enrolled in a general curriculum. The labor-market experience of young black men following vocational training was found to be particularly poor. In contrast, female students enrolled in business and office courses during high school were more likely to graduate and find secure jobs than female students in the general curriculum, although this advantage disappeared within 10 years after graduation.[41]

More recently, however, Bishop found that high school vocational training *does* have positive impacts on wages, hours, and earnings immediately after graduation for noncollege-bound students. Those students are also more likely to find jobs with employers who offer a relatively large amount of on-the-job training. The effect is especially positive among young men who have earned As and Bs in their vocational courses.

Interestingly, Bishop also found that noncollege-bound students who have taken more than the average number of general academic courses but no vocational courses attain lower wage rates and earnings than vocational students in the two years after graduating from high school. Substituting vocational coursework for nonacademic courses does not lower scores on tests of basic skills. In fact, a business, office, or sales curriculum seems to improve verbal test scores for both sexes. Males who study a technical curriculum raise their occupational aspirations and their math performance. On the other hand, substituting vocational education courses for math and science college-preparatory classes has a negative effect on career aspirations, deportment, and improvements in basic skills. The implication of Bishop's findings is that vocational courses are useful to noncollege-bound youth so long as they do not substitute for solid preparation in math and the sciences.

One of Bishop's important recommendations is that students who are not planning to go on to college and are enrolled in a vocational education curriculum be encouraged to take courses that will give them a solid grounding in basic skills and college-preparatory math and science courses. That approach would help noncollege-bound students keep their options open and increase their levels of educational achievement.[42] Bishop's recommendation echoes Parnell's concern for the development of a comprehensive, structured high school curriculum that will provide the basis for a young worker to gain a firm footing in the workplace or move on into advanced training.

Recommendation #7: The 43 percent of American high school students who are tracked into the watered-down general curriculum and the 19 percent who are in vocational courses should have a new curriculum that mixes solid academic basics and applied learning.

Recommendation #8: The high school vocational system should strengthen the occupational preparation it provides, but not in narrow or dead-end job categories. Instead, students should be given preparation leading to further education or training in postsecondary institutions or by employers.

Recommendation #9: High school vocational education should include a mix of campus learning and carefully structured applied learning in the workplace to accommodate different learning styles and to allow students to learn and earn at the same time.

Noncollegiate Vocational, Trade, and Business Schools

Vocational, trade, and business schools offer training in skilled and semiskilled occupations, including such fields as cosmetology, hair dressing, health-support services, truck driving, design, business, computers, and flight. Although enrollments in these schools have been increasing generally, the largest growth has occurred in private schools.[43] The Bureau of Labor Statistics reports that in 1985 private vocational schools were training more than two million people—2.2 percent of all workers—while their public counterparts were training about 1.5 million employees—1.6 percent of all workers—to qualify for their jobs.[44] Licensing requirements for public and private schools of this kind vary among the states, and the quality of the training is uneven.

Some studies have pointed to higher rates of pay for both men and women who have taken postsecondary vocational training than for those who have not, regardless of whether they are high school dropouts or graduates.[45] A study of five kinds of postsecondary training found that training in a business college or technical institute had a positive effect on occupational mobility for blacks, but not for whites. Other kinds of postsecondary vocational education examined in the study appeared to have no significant effect on advancement.[46] As in most other forms of training, the quality of the training is the most important factor affecting placement and success on the job.

Community, Technical, and Junior Colleges

Community, technical, and junior colleges have become an increasingly important source of occupational training in communities across the United States. According to the Bureau of Labor Statistics, such schools provided qualifying training for about five million American workers in 1985—about five percent of the total work force. Other than colleges and universities, the junior colleges and technical institutes are the largest job-training system within the nation's school system.

In 1933–34, there were only 532 two-year colleges nationwide, with an enrollment of just over 110,000; in 1983–84, the number of two-year institutions had risen to 1,219, and full-year enrollments to nearly five million. About 55 percent of all college freshmen that year enrolled in community, technical, and junior colleges. Counting the estimated 4.5 million noncredit enrollees, total enrollments in junior colleges and other public and private two-year institutions reached nearly 10 million in 1983–84. Reflecting the attraction of community colleges to adult learners, the average age of the student body was 29.[47] An estimate from the National Center for Education Statistics indicates that total revenues for two-year colleges in FY 1988 will reach $13.9 million, serving an estimated 4.7 million enrollees for the 1987–88 school year.[48]

The appeal of these institutions to adult learners derives from a variety of factors, including affordable tuition and fees, liberal admissions policies, accessibility (courses are frequently offered on-site at businesses, union halls, and other off-campus areas), a wide range of course offerings, and flexibility of class scheduling (most schools are open from early morning to late evening).[49] Flexible scheduling is especially important because, as one study of these schools found, almost 75 percent of the male students and more than 50 percent of the female students (both full-time and part-time) were employed while attending classes.[50] For all these reasons, people seeking retraining or updating of their career skills, as well as people seeking to enter or reenter the labor market, find community and junior colleges an attractive source of training.

The Military

Military training accounts for the largest share of the government's training expenditures. In FY 1989, $17.6 billion was appropriated to provide 249,168 man-years of training to people in all service branches. The instruction offered included basic recruit training, as well as more specialized skill training, flight training, officer preparation (Reserve Officer Training Corps, military academies, Officer Candidate School, etc.), medical training, professional development, and reserve training.[51]

According to the Bureau of Labor Statistics, in 1985 the military helped 1.9 million workers, or about two percent of all American workers, qualify for a civilian job. These people were highly concentrated in specific occupations. The military trained almost half the nation's aircraft-engine mechanics, 22 percent of the nation's data-processing equipment repairers, 21 percent of the nation's electronic, communications, and industrial-equipment repairers, 17 percent of the nation's electronic technicians, and 12 percent of the nation's electricians.

In addition to the basic and specialized training offered by the military, each service branch has developed cooperative arrangements with civilian schools to enable service personnel to earn high school diplomas or work toward college degrees. Several credit-by-examination and correspondence programs are also offered. Finally, the Army, Navy, and Marine Corps have developed programs that enable enrollees to receive credit for their service experience in civilian apprenticeship programs. Approximately 50,000 soldiers, sailors, and marines are currently registered in these military apprenticeship programs, which offer training in 80 occupations.[52]

The postsecondary occupational education system outside the four-year schools has two glaring weaknesses. First, it is highly decentralized, which encourages wide variation in the quality of education offered to students. Second, it provides training to relatively small proportions of workers in most of the noncollegiate occupations. Decentralization of occupational education encourages competition and accessibility, but it would be advisable for national institutions to do research and development on curriculum and delivery; to collect, evaluate, and disseminate best practices; and to develop performance standards for individual occupations. That kind of national effort would allow the various providers of occupational education to have access to state-of-the-art practices, would encourage integration of the crazy quilt of programs available, and, by improving the quality of programs, would increase participation.

Any number of national institutions could take on those functions. The current providers, including postsecondary vocational schools, junior colleges and technical institutes, and the military, all have national associations that can help. Industry associations, occupational associations, and labor unions also provide institutional expertise and access to employer institutions and individuals in specific occupational groupings.

Recommendation #10: Federal and state governments should encourage improved quality in occupational education and training by providing matching grants to promote—

- **the development of curriculums that mix academic and applied learning delivered in both the classroom and work settings;**
- **research and development on curriculum and delivery of training in particular occupations;**
- **the collection, evaluation, and dissemination of best practices in training for specific occupations; and**

- **the development of performance standards for individual occupations.**

The institutions receiving these grants should be trade and professional associations, unions, schools, or other institutions that—

- **represent members of occupations;**
- **provide training in occupations; or**
- **represent industries with a concentration of employees from particular occupations.**

Four-Year Colleges and Universities

Colleges and universities have had enrollments of over seven million annually since 1975, rising to around 7.8 million in 1987. The number of earned baccalaureate degrees more than doubled from 1950 to 1980. About a million baccalaureate degrees are now earned annually.[53]

Four-year colleges and universities, which cost about $92.5 billion in the 1984–85 school year,[54] provide more qualifying training than any other kind of school. In fact, they help more people qualify for their jobs than all other schools put together. As is apparent in Table 3, four-year schools in particular play an important role in preparing white-collar and technical elites.

TABLE 3

FREQUENCY OF QUALIFYING TRAINING IN COLLEGES AND UNIVERSITIES BY OCCUPATIONAL GROUP

Occupational Group	Percentage of Group
Physicians	92.8
Teachers	92.7
Lawyers	90.6
Pharmacists	88.5
Bookkeepers	84.5
Administrators	73.6
Clergy	72.6

Source: Carey, Max. Bureau of Labor Statistics, U.S. Department of Labor, *How Workers Get Their Training* (Washington, DC: U.S. Government Printing Office, 1985).

Although a college education has long been accepted as a means to good jobs and high earnings over a lifetime, evidence suggests that the wages of new workers who are college-educated have been falling relative to the wages of less well-educated job entrants and that the rate of return to be expected from an investment in higher education is, therefore, declining. The growth in size of the college-educated population has been suggested as a principal factor in that decline.[55]

The increasing number of college enrollments reflect not only the large number of young people of college age, but also an increased rate of college attendance. In attendance, older people are now more likely to attend college than they used to be. Between 1972 and 1976, the proportion of college students aged 25 and older rose from 28 to 33 percent. In 1986, 40 percent of total college enrollments nationwide were students age 25 or older. Much of the increase is attributable to the growing number of women over 35 who are enrolling in college. Their number climbed from 418,000 in 1972 to 1,197,000 in 1986, nearly a three-fold increase. Enrollments for all persons aged 25 and over roughly doubled during that same period.[56]

Although colleges and universities have long been involved in educating adults through continuing education and extension departments, the shift to an older student population has led to (or perhaps been partially caused by) the development of new options to accommodate older students' needs. Admissions requirements and formal entry qualifications have been eased; classes are scheduled at times and places convenient to working adults; the media are used to transmit course material; and independent study is encouraged. A few colleges and universities also provide credit for nontraditional learning experiences in various external degree programs. As the United States' population continues to age in the next decades, colleges and universities will undoubtedly face an even greater challenge in adapting to the needs and expectations of an older clientele.[57]

Occupational data supplied by the Bureau of Labor Statistics show that a growing proportion of jobs in the United States will require college and university degrees.[58] The major impediment to attending college, however, is that as more and more Americans go to college, the competitive advantage of a college degree declines, even while the cost of going to college is increasing astronomically. To deal with that problem, the nation needs a mix of strategies, including increased subsidies and loans for college students and encouragement of cost-effective and flexible educational programs in colleges and universities.

Recommendation #11: Public subsidies and loans for college students should be expanded.

Recommendation #12: Colleges and universities should be encouraged to—

- **experiment with less expensive and more flexible learning formats;**
- **provide more applied curricula in academic subject areas; and**
- **integrate course offerings with learning experiences in other educational institutions, especially noncollegiate schools, as well as the home and the workplace.**

Apprenticeship

Formal apprenticeship programs, which are now available in some 805 trades, include both classroom instruction (a recommended minimum of 144 hours a year) and hands-on learning (a minimum of 2,000 hours, or one year, of on-the-job training). Under the National Apprenticeship (Fitzgerald) Act of 1937, and implementing regulations Title 29 CFR Parts 29 and 30, apprenticeship program sponsors determine their own requirements and administer their own training programs within the framework of basic standards laid down by State Apprenticeship Councils in 27 states or the U.S. Department of Labor, Bureau of Apprenticeship and Training in 23 states. If apprenticeship programs meet these standards they are "registered," and people who successfully complete those programs receive certificates of completion that recognize them as skilled craft workers.[59]

The competition to be selected for apprentice employment is often intense. The recruiting and selection process for such programs are usually open for only a few weeks each year, and the number of openings is limited in each occupation. Application to an apprenticeship program generally requires a high school diploma or its equivalent, and may require an aptitude test and an oral interview. While formalized efforts to lower perceived barriers to training for women and minorities, which began in the 1970s, have helped to increase the proportion of enrollees who are minorities to 20 percent and who are women to about 8 percent, workforce parity remains an unrealized goal for most program sponsors.

For successful applicants, training periods range from one to six years in length, depending upon the degree of skill involved, with most trades requiring three to four years of instruction. While they train on the job, apprentices are paid at progressive wage rates, usually starting at about half the journeyworker rate and climbing up to 95 percent of full pay near the end of the apprenticeship period. Those who complete the entire program are usually among the highest-paid skilled workers.

Related technical instruction may be given in local vocational schools and junior colleges, and in some cases through home-study courses. The Carl D. Perkins Vocational Education Act of 1984 contains 15 references to apprenticeship and among other relevant provisions provides for the U.S. Secretary of Education to make grants to states to be used in accordance with state plans for related instruction for apprentices. Grant funds may be used for curriculum development, acquisition of instructional equipment and materials, personnel training, and additional services and activities. State plans must provide assurances that federal funds will be used to supplement (not replace) the amount of state and local funds that would be made available for the use specified in the state plan.

Data provided by the Bureau of Apprenticeship and Training in the U.S. Department of Labor indicate that there were 335,508 registered apprentices receiving training in 1988, an increase of 14,535 over the previous calendar year. More than 38,000 apprentices completed required training, while 95,550 were newly indentured (i.e., formally accepted as apprentices). As of September 30, 1988, slightly more than 50 percent of the registered apprentices in the country were in construction industry building trades. Carpenters, electricians, and the pipe trades contained almost 30 percent of all registered apprentices.

The future of apprenticeship is unclear.[60] In concept, it is an ideal learning system in that it mixes applied and academic learning. It also focuses on the portion of the high school graduating class that currently tends to receive insufficient training. Moreover, as discussed previously, employers increasingly need noncollege personnel with both better basic and job-related skills. And yet, despite its apparent strengths, the apprenticeship system has failed to expand as the less applied parts of the postsecondary learning system, especially junior colleges, technical institutes, and private vocational schools have expanded. The usual explanation of that failure points toward the following weaknesses:

- The current apprenticeship system is not flexible. Learning is based on rigid time requirements and not on the achievement of specific competencies. Federal, state, and industry regulations inhibit flexibility in restructuring curricula and apprenticeable occupations. The current inflexibility discourages employers' interest in expanding apprenticeship.
- The current apprenticeship system is isolated from the rest of the nation's education and training institutions. This isolation is a lost opportunity at a time when academic preparation in the postsecondary noncollegiate institutions would benefit greatly from a stronger grounding in applied workplace learning.
- The current apprenticeship system is too narrow. It is concentrated in traditional blue-collar occupations with relatively long-term training requirements. Apprenticeship has not expanded to include occupations requiring short training periods, nor has it expanded to include white-collar occupations, in either the industry or service sectors.
- The current apprenticeship curriculum has not adjusted to requirements for retraining after the initial apprenticeship has concluded. As a result, the system prepares apprentices to qualify but offers little formal upgrading.

Recommendation #13: Apprenticeships should be more flexible, that is, based more on competency than on time, and less isolated. The system should use a broader array of partners outside the workplace, including education and training institutions as well as trade and professional associations. In addition, the concept of apprenticeship needs to be extended to as many collegiate and noncollegiate occupations as possible without creating unnecessary certification procedures and red tape. Apprenticeship programs should be developed for—

- **occupations that require less education and training than given in traditional apprenticeship programs (for example, many of the occupations now credentialed by two-year colleges, technical institutions, and private vocational schools);**
- **the growing number of technician jobs that require more extensive education and training than provided by the current apprenticeship system; and**
- **professional occupations in areas that would benefit from a stronger focus on applied learning, such as teaching, piloting, and engineering.**

Foreign Experience With the Transition From School to Work

The American approach to the transition from school to work undoubtedly seems unbearably haphazard to most Western Europeans, especially citizens of German-speaking countries, where the apprenticeship system is a vital part of the employment system.[61] In West Germany, for example, half of all 15-to-18-year-olds enter apprenticeship training after completion of their compulsory schooling, as do about a third of all noncollege-bound youth in Austria and Switzerland.

Youth employment is a serious concern in Western Europe, as well as in Canada, Australia, and Japan, and these nations have developed specific policies and programs designed to smooth the way of young people into the labor market. Some examples follow.

Australia

The Office of Youth Affairs, which is now part of the Department of the Prime Minister and Cabinet, was established in 1977 to coordinate the commonwealth's policies and programs affecting youth. It has begun a three-year program to improve the quality, relevance, and coordination of youth services.

Australia spent about $11.4 billion on education in 1983–84. Much as in the United States, the governments of the six Australian states and the Northern Territory are responsible for administration and most funding for primary schools, secondary schools, and technical colleges. The national government takes direct responsibility for education in the Australian Capital Territory and a few external territories and funds all universities and colleges of advanced education.

Youths between the ages of 6 and 15 are required to attend school. In 1981, over 90 percent of students remained in school until the age of 16 and 42 percent until the age of 18. About 41 percent of all 18-year-old students in 1983 went on to higher education, for which there are no fees charged. Three types of post-secondary education are available:

- Colleges of technical and further education (TAFEs) offer a wide range of vocational and nonvocational courses in particular job skills and general preemployment training.
- Colleges of advanced education offer less theoretical courses than universities and encourage part-time study by working students, who may also alternate periods of full-time study with full-time employment.
- Universities offer the usual academic courses.

As in Germany, private industry, through the apprenticeship system, has the major responsibility for developing skilled workers. Apprentices receive a combination of on-the-job training and classroom instruction, often provided by the TAFEs. Forty percent of males complete their formal education and enter apprenticeships, which last about four years and are concentrated in seven trade groups (about 70 percent in building, electrical, and metal skills). Few females enter apprenticeships, but most of those who do learn hairdressing skills. Nontrades employment training is also provided through the Australian Traineeship System, which is administered and funded by the commonwealth and state and territory governments and planned in consultation with industry, unions, youth, the education sector, and training providers.

Vocational guidance and counseling is provided by the schools and by the Commonwealth Employment Service, which is also responsible for about 20 percent of all job placements in Australia. About half of the schools have "work experience" programs for students, ranging from community service projects to job observation and short-term, usually unpaid, on-the-job training projects. There are also a number of government-sponsored transition programs that pay participants to attend basic literacy and preemployment courses at TAFEs, although participation rates have been fairly low. Wage-subsidy schemes are also available to employers who agree to hire disadvantaged, unemployed youths. Other programs offer financial assistance to students who enroll in special vocational courses and unemployment benefits to teenagers, who are not required to have held a job to qualify. Finally, the commonwealth spends about $1.42 million annually on a Community Employment Program to provide temporary jobs for disadvantaged people, including women, aboriginals, members of ethnic groups, the mentally and physically handicapped, and youths from isolated areas.

Great Britain

Youth unemployment is a major problem for Great Britain, where one quarter of all youths under the age of 25 were unemployed in 1983. To combat the problem, the government has proposed improving education, promoting technical training in secondary schools and colleges, and reforming vocational education qualifications. In 1983, Great Britain established the Manpower Services Commission's Youth Training Scheme.

British education is free and compulsory to the age of 16; local education authorities are responsible for providing it. Comprehensive schools serve 90 percent of all students at that level, and the other 10 percent attend "grammar" schools after successfully completing an examination at age 11. Students take exams after completing school at age 16, and another exam leads to a certificate of prevocational education for students wishing to continue in full-time education for another year to prepare for work or for vocational courses.

Higher education is provided through university, polytechnic, and college training. As of 1984, only 13 percent of all 18-year-olds entered full-time postsecondary education. Colleges also offer nonadvanced courses for students who wish to combine part-time education with work.

Although employers provide most training in Great Britain the government has become involved in various employment and training programs, enrolling nearly 700,000 people in 1984-85. The well-known Youth Training Scheme guarantees a full year of vocational training to every 16-year-old who cannot find a job after leaving school. Trainees receive a combination of work experience and classroom instruction, plus a weekly subsistence allowance. About one million young people have participated in the program since 1983.

Other government programs developed to help the unemployed include Enterprise Allowance, which promotes the development of small businesses; Job Splitting, offering employers an allowance when unemployed persons are hired; Job Release, allowing early retirement if the retiree is replaced with an unemployed person; and voluntary projects, permitting an unemployed worker to continue to receive unemployment benefits while performing voluntary services. Community Industry, a nonprofit organization, also provides training and jobs in community services for disadvantaged youths 17-to-19-years-old.

Canada

In contrast to its centralized employment policies, Canada recognizes no federal role in education except for native peoples and military dependents. All educational programs are the responsibility of the provinces, which delegate authority to local school boards.

The provinces require school attendance for at least 10 years. Secondary education is offered in secondary schools (offering both academic and vocational courses) and vocational schools. Postsecondary education is offered at a variety of institutions, including universities, liberal-arts colleges, theological colleges, and specialized institutions that offer degree programs in a single field, such as engineering or education. Community colleges also offer college-level courses. Not all require a high school diploma, and, as in the United States, their popularity is increasing, particularly among adult part-time students who are pursuing training in a particular field.

Vocational education is available through apprenticeships and through attendance at vocational training facilities, including community colleges, provincial trade schools, private business colleges, and on-the-job training programs. Canada also offers a number of other training opportunities for young people, such as the Canada Summer Youth Employment Program, which has two components: Young Canada Works offers short-term jobs in community service projects, and Youth Job Corps provides both summer and longer employment on federal projects. A network of 400 Employment Centers provides information about those programs and acts as the Canadian job placement service. Other employment-related programs for young people include the following:

- Job Exploration by Students enables high school students who are unsure about continuing school to experience working first-hand.
- Canada Manpower Training Program provides training and allowances to young people who have been out of school for at least a year and are at least a year older than the school-leaving age. The training must be determined to lead to employment and to increase earning capacity.
- Canada Manpower Industrial Training Program provides on-the-job training to eligible people and reimburses employers for part of the trainees' wages.
- Job Experience Training offers government-subsidized on-the-job training to unemployed and out-of-school youths between the ages of 15 and 24 for a period of up to 26 weeks. Preemployment work orientation sessions are also provided.
- Small Business Intern Program encourages hiring recent university graduates by offering government subsidies of 50 percent of wages for the first 12 months of employment.
- Employment Tax Credit Program offers employers between $1.50 and $2.00 an hour as a tax credit for each new job created.
- Mobility Scheme provides financial assistance to unemployed and underemployed people aged 18 and older who want to extend their job search geographically or who need relocation assistance to take a new job.

France

In France, about one-third of young people aged 16 to 25 are in school, slightly more than a third are in the work force, 17 percent are unemployed, 3 percent are in national service, and 2.5 percent are in apprenticeships. To assist unemployed youths, the government has developed "solidarity contracts" that include job sharing, a combination of part-time work and job training, gradual replacement of retirees with young workers, and efforts to raise hours of work and salaries. Since 1983, the government has also subsidized an "employment-guidance contract" allowing employees to take up to 30 hours off work for vocational guidance organized by the French National Employment Agency or the Adult Vocational Training Association. Another program offers employers partial funding for training workers who had previously been unemployed for more than a year. Efforts to improve education in "priority zones" where school failure is high, to increase the proportion of students completing baccalaureate degrees, and to provide computer training to all young people are other examples of French efforts to improve the work force.

As in most European countries, education in France is compulsory until age 16. At the secondary-school level, there are vocational schools, lower- and upper-secondary schools, and training centers for apprentices. The student, his or her family, and a council of teachers, counselors, and representatives from other interested groups determine the student's course of study. Vocational students usually take preparatory classes only, but a combination of classes and on-the-job training is also possible. Diplomas may be awarded for knowledge in a particular professional area or in a specific trade.

School dropouts who have no specific job skills may receive training under the Basic Vocational and Social Contract. Under this arrangement, the state and the employer each pay a portion of the minimum wage, and the amount paid by the employer increases every six months if the trainee remains with the same firm.

Federal Republic of Germany

The cornerstone of employment policy for youths in West Germany is the Federal Youth Plan of 1950, which focuses on advanced schooling and vocational education for young people aged 14 to 21. Vocational training is the predominant method of preparing for a career. Of the 26-to-35-year-old age group, about 13 percent of males and 11 percent of females have attended a university or college, but 73 percent of males and 64 percent of females have received vocational or trade training.

Such training is provided in full-time, specialized vocational schools and in what is called the "dual system" (apprenticeship). Apprentices sign on with a firm and receive on-the-job training four days a week and participate in classroom instruction on the fifth day. The classroom instruction is two-thirds trade-oriented studies, which may continue for two to three and one half years, and one-third general studies. Students who complete their apprenticeships must take a state-approved exam, which 85 to 90 percent pass.

There were about 1.72 million youths in apprenticeships at the start of 1984. Government-approved trades number 432, although most young people choose from among 15 of the more popular careers. More than half of the apprentices are placed in small businesses with less than 50 employees, which narrows their training. To broaden the skill base, students have been allowed to attend interfirm training centers since 1973.

Private firms play a major role in the apprenticeship system, providing on-the-job training and subsidizing most of the classroom instruction as well. Large enterprises often have their own vocational schools, which are licensed and funded in part by the state. These highly selective schools use admittance tests and personal interviews to screen applicants.

West German schooling, which is compulsory from ages 6 to 18 and is provided free, is the responsibility of the several states. Students must attend school full-time for at least nine years and then at least part-time for another two to three years. In 1983, the total school enrollment was 10.6 million. At age 10, after an examination, each student must choose the type of secondary school to attend: junior high (completes compulsory school requirements and prepares the student for an occupation); intermediate school (provides a middle level of education and prepares the student for higher-level training in a nonacademic occupation); grammar school (required for admittance into a university); or comprehensive school (tracks the student according to ability and provides vocational familiarization as part of the curriculum). Both grammar school and intermediate school offer weekend and evening classes.

The West German government has worked to increase enrollments in higher education by abolishing student fees and providing grants to poor students for living allowances. Between 1970 and 1983, new college places were created for over 200,000 students. In 1983, freshman enrollments totaled 233,000, three times the number in 1960.

Federal Employment Services (FES) provides free vocational counseling and placement into jobs and apprenticeship positions. Audiovisual aids and career suitability tests are available at self-information centers, and FES staff visit schools and parents' meetings. FES is also responsible for counseling juvenile delinquents.

There are a number of active student, political, and union youth groups in West Germany, joined together in their efforts to support education and self-actualization and to provide support during job selection, training, and employment. More young people, however, are going on to higher education, the number of jobs in older, strongly unionized industries are decreasing, and with higher rates of youth unemployment, membership in labor union groups has begun to decline.

Ireland

The government of Ireland gives youth employment and training programs high priority, and many new youth programs have been introduced since 1981. About 31 percent of total unemployment is accounted for by people under age 25. A Youth Employment Agency was established in 1983 and is funded by the one percent Youth Employment Levy on all personal income. In the same year, the National Youth Policy Committee was appointed to develop a comprehensive national youth policy. To ease the transition from school to work, the education system offers career and occupational guidance, and the National Manpower Service provides placement and occupational guidance officers.

Funding from the Youth Employment Levy provided 35,700 young people with training during 1985. About 25 percent of the country's school dropouts were involved in a government-training or work-experience program. Youth Employment Services supports general vocational training; training in basic construction skills provided while renovating community facilities; training for apprentices; special programs in the hotel, catering, and tourism industries; farming training; community workshops offering vocational skills training and basic skills; and eight pilot Community Training and Employment Consortia that bring together community organizations, educational institutions, and manpower authorities.

Other programs involving community service include the Teamwork Scheme, in which voluntary organizations recruit unemployed young people who are between the ages of 17 and 25 and who have been registered for six months with the National Manpower Service for temporary work. The organizations receive start-up assistance and wage subsidies from the Youth Employment Agency. That agency is also responsible for implementing Europe's Social Guarantee program, a pledge to ensure that all young people who complete school be offered basic training, work experience, or both for at least six months in order to prepare for a career.

The National Manpower Service also funds the Work Experience Program for youths who have left school and are under age 25. Young people in this program receive 26 weeks of on-the-job training while being paid a weekly allowance, reimbursed to the employer by the government, and are given a certificate of completion. The Enterprise Allowance Scheme provides unemployed young people who want to start a business with a venture capital grant or an operating cost grant.

In addition to those government-administered programs, the private sector offers five graduate employment programs to young degree- and diploma-holders in particular skill areas such as science, marketing, and technology. The National Manpower Service provides placements, and the Youth Employment Agency provides a one-year subsidy for employers.

Norway

Unemployment among young people is not a big problem for Norway. Education, which is compulsory until age 16, is the joint responsibility of the national, county, and municipal governments. Upper-secondary schools offer a combination of vocational and general education for young people between the ages of 16 and 18 and for some older people who wish to improve their skills. Colleges, universities, and other specialized schools provide higher education.

Norway offers a guarantee of training or apprenticeship in a public or private enterprise for every young person under 20 years of age who has not been accepted into a school and is unemployed. The Ministry of Labor administers this program at the national level. Also, national military service is compulsory for all Norwegian males.

Sweden

In contrast to Norway, but like the rest of Western Europe, Sweden has a serious youth unemployment problem. Working toward a full employment economy, Sweden has most recently been promoting growth and economic adjustment by strengthening training programs and increasing efficiency of the Employment Service. Also, employment-generating programs for particular target groups, including youths, the elderly, and the disabled, have high priority. The minimum age for entering the job market is 18.

Swedish education is compulsory to the age of 16. About 94 percent of all students go on to upper secondary school, which has a dropout rate of about 20 percent. About 32 percent of the males and 43 percent of the females who graduate go on to postsecondary education.

Preparation for work begins in the schools in about the sixth year, when counselors and trained teachers offer information about training and educational opportunities and job possibilities. In the last year of compulsory school, each pupil spends two weeks observing one or more private or public workplaces. The Practical Worklife Orientation program, started in 1982, gives youths before ninth grade 6 to 10 weeks of observation in a variety of firms. To help overcome sex stereotyping, boys and girls must observe jobs where the opposite sex predominates.

In 1980, under terms of the Youth Guarantee, schools became responsible for following up on youths under age 18 who have not enrolled in upper-secondary school. These youths are offered work experience or a job, and about 21,000 took jobs under the program in 1983.

Also in 1983, the Revised Swedish Compulsory School Curriculum took effect. It places increased emphasis on combining theoretical and vocational study in the lower-level compulsory schools. Another innovation has been in-depth studies of particular fields at the senior level.

In addition to the programs noted, the Swedish government funds three major efforts to prepare young people for the labor market:

- Relief-work programs provide youths with an opportunity to gain work experience and try out different jobs. Relief-work grants cover half of relief workers' labor costs and are available to private employers for workers aged 18 and over and to public sector agencies for persons over age 20. About 27,000 persons participated in those programs during 1984–85. In 1980, the program was changed so that 16- and 17-year-olds could be placed in subsidized work for a maximum of 40 weeks. Participants receive regular student aid plus additions from local governments, with contracts negotiated between employers and trade unions.
- Labor-market training is provided at special centers under the supervision of the Labor Market Training Group, a new authority consisting of a central board and 25 regional commissions. Training is free, and participants receive training grants. In 1983, 38,000 trainees participated in the program, about a third of them under the age of 25.
- Youth team projects for the hard-core unemployed were begun in 1984. Every 18- or 19-year-old who is not employed, in school, or in training is entitled to a job as part of a youth team at a central, county, or municipal government agency or in a Church of Sweden congregation. Usually, a participant works four hours a day and receives a regular wage. During the first half of 1984, some 44,000 youths participated.

Finally, the Swedish government offers recruitment subsidies payable to private firms and public employers who take on job-seekers, aged 18 to 24.

Because of the government training assistance, most private employers do not provide in-house training to young workers. Only about a fourth of all employees in the private and public sectors participate in organized employer training; such training is most common among 24-to-35-year-olds in certain industries, such as banking and insurance.

The government subsidizes four kinds of in-house training: "bottleneck training" in skill areas with a shortage of labor; training for structural change; training for redundant workers; and training for the underrepresented sex. There are also a few government-subsidized company schools and some government apprenticeships in artisan trades.

There is no minimum wage in Sweden, although contracts provide for special wage rates for persons under 18. Military service is compulsory.

Japan

Japan, unlike many other countries, stresses academic rather than vocational education for its youth. Despite its spectacular successes in that area, however, Japan is currently engaged in a major educational reform effort that stresses individuality, choice, flexibility, and creativity.

The reform is due in part to the high cost of education and the diminishing returns of higher education (university graduates now face a declining income in comparison with high school graduates, and fewer managerial positions are available). Ironically, some of the increased competition for high management positions results from the phenomenally high level of education for all Japanese youths.

Japanese education is compulsory through age 15, and no distinction between students on the basis of ability or achievement is made up to that time. Five types of educational institutions offer occupational instruction to students who do not go on to a university: upper-secondary schools, technical schools, special training schools, junior colleges, and miscellaneous schools. Passage to upper-secondary schools is on the basis of examination scores and formal application. A student may enroll in either an academic or a vocational program, but both offer primarily classroom instruction. The work attitudes instilled at this level of schooling are diligence, discipline, and commitment to cooperative behavior. Industrial arts and homemaking courses make up less than 10 percent of the courses available in lower-secondary schools, and formal vocational training does not begin until after graduation from those schools. Career guidance is not stressed in high schools; the emphasis is on gaining admission to top universities or specific firms.

Technical colleges, which were established in 1962 to produce skilled technicians, offer courses primarily in engineering and merchant-marine fields. The programs usually last 5.5 years. Special training schools, established in 1976, exist at both the upper-secondary and postsecondary school levels and offer training in engineering, agriculture, medical care, nursing, commerce, home economics, and the arts, over a two- to three-year period. More than 538,000 students were enrolled in those special training schools in 1985. Junior colleges, which attract mainly women (about 90 percent of the enrollees), provide general education and vocational education. Finally, the miscellaneous schools offer practical courses in automotive repair, bookkeeping, dressmaking, cooking, and computer technology.

Some of Japan's large companies provide vocational training to their employees, but many managers believe that employees have an obligation to acquire the skills they need to improve their work on their own time. Few small companies offer formal internal training, and most that is offered is of short duration, usually less than 10 days. Only 3.8 percent of firms that offered training in 1980 provided it for periods of 6 months or more, and in 1978 less than 2 percent of all labor costs for private companies was for formal education and training.

Japan has a national vocational training law that provides government funding for public and private programs. Training allowances for the unemployed, grants for educational leave, and financial assistance to small- and medium-sized firms are all available under the law. Also, the Ministry of Labor oversees government-sponsored basic training, skill-improvement training, retraining for new occupations, and instructor training. Most employers do not recruit from those programs, however, so participation is low.

The transition from school to work is fairly smooth in Japan, in part because many companies recruit from the most prestigious universities and in part because Japan has an efficient Public Employment Security Office that works closely with secondary and postsecondary schools and employers. Most students do not apply directly to companies, but wait for the Office to direct them to job vacancies.

Conclusions

Each of the examples above show a national commitment to helping young people and other entry-level workers secure a solid foothold in the labor market. There are, however, significant differences between countries, and some of the most successful efforts take completely opposite approaches. Searching for an approach that will serve the United States best will require more than merely transferring ideas from other countries.

PART II

THE SECOND CHANCE SYSTEM

Historical Background

Since the early 1960s, the federal government has subsidized a variety of training programs, aimed primarily at serving economically disadvantaged persons who have not benefited from early educational opportunities. These programs can be conceived of as a "salvage" system to provide a "second chance" for people who have not made successful transitions from school to work.[62]

The federal effort began during the Kennedy Administration, with the enactment of the Area Redevelopment Act (ARA) of 1961. ARA established a precedent for federally subsidized training, offered in conjunction with loans to companies that agreed to relocate or expand industrial facilities into impoverished areas.

Although never serving more than 12,000 people in a year, ARA was quickly followed by the more ambitious Manpower Development and Training Act (MDTA) of 1962, which offered participants up to a year of skill training in the classroom or on the job. Originally, MDTA anticipated current concerns about the dislocating effects of technological change and directed its efforts to adult family heads who could demonstrate by their employment history a strong attachment to the labor force. Soon after MDTA's enactment, however, demands for skilled workers increased to meet production needs associated with the Vietnam War, and unemployment levels for adult males dropped. In response, federal policy shifted to focus on the problems of poor youths and minorities, who continued to have high unemployment rates. The most important step in that direction was the enactment of the Economic Opportunity Act (EOA) of 1964, which was to become the cornerstone of President Johnson's War on Poverty.

Nearly half of EOA funding in the first year was for youth programs, including the Neighborhood Youth Corps (NYC) and the Job Corps. Both programs offered poor youths an opportunity to learn job skills, NYC by offering a program of part-time work experience, and the Job Corps by providing basic education and occupational skill training combined with an array of medical, dental, and other support services in a residential setting, far away from debilitating home environments. EOA also offered a small program for adults under Title V, providing work experience, classroom training, and family services to the parents of dependent children on welfare.

Because EOA was reauthorized annually until 1967, frequent amendments to the Act added new programs every year: Operation Mainstream (1965) provided elderly workers with part-time jobs in rural conservation projects; New Careers (1966) offered public sector jobs to the economically disadvantaged; the Special Impact Program (1966) focused federal training dollars on selected urban slum areas; and the Concentrated Employment Program (1967) created a new delivery system to provide a complete range of employment and training and related supportive services in targeted rural and urban areas with very high rates of unemployment.

MDTA was also amended several times in that period to reflect the new policy direction of serving poor youths. In 1967, by executive order, President Johnson created a new MDTA program called Job Opportunities in the Business Sector. The new program offered employers reimbursement for extra costs associated with hiring and training disadvantaged workers and established the National Alliance of Business to recruit employers for that effort.

The roster of new antipoverty programs was completed in 1967 with the authorization of the Work Incentive (WIN) program as an amendment to the Social Security Act. WIN was designed to provide training, supportive services, and job placement assistance to eligible recipients of Aid to Families with Dependent Children (AFDC).

Efforts to rationalize what had become an expensive array of separately funded programs began with the presidency of Richard Nixon in 1969. Although resolved to decategorize those programs into a single block grant, shift administrative control to state and local governments, and cut expenditures, the President first found himself bowing to the realities of a severe recession in 1970-71 by signing into law a new $2.25 billion, two-year Public Employment Program under the Emergency Employment Act of 1971. With the addition of these funds, outlays for federal employment and training programs reached the level of $5 billion by FY 1973. Legislators, policy makers, and the President were at last in general agreement that it was time to reform the federal employment and training system, although they did not agree on what form a new system might take.

Reform legislation, called the Comprehensive Employment and Training Act (CETA) of 1973, was the end product of a protracted and partisan struggle. As finally enacted, this compromise provided for a comprehensive program of training and related services for the economically disadvantaged, a program of transitional public service employment for the most severely disadvantaged and for eligible veterans in areas of very high unemployment, special federal training programs for Indians and migrant and seasonal farm workers, a reauthorization of the Job Corps, and a National Commission for Manpower Policy to make recommendations about meeting the employment needs and goals of the nation. The new law gave local prime sponsors broad authority to develop programs tailored to community needs. Training programs, meant to be the central focus of the new legislation, paid stipends at least equal to the minimum wage.

Despite the training emphasis, CETA was soon overwhelmed by its public job-creation activities, enacted as a response to a deep nationwide recession that was prompted in part by an OPEC oil embargo. Reacting to congressional pressure, President Ford reluctantly agreed to a new Emergency Jobs Program, which became a separate title under CETA in 1974 and an addition to a small public service job-creation program that was part of the original legislation. Together these two public job-creation titles soon accounted for more than half of all CETA outlays. Shortly before the presidential election of 1976, President Ford agreed to an extension of the Emergency Jobs Program but balked at any further increase in funds.

The newly elected Carter Administration did not share that reluctance and called for an expansion from 300,000 to 750,000 PSE job slots over a nine-month period in 1977. Local governments, pressured by the Department of Labor to fill those slots immediately, sometimes enrolled ineligible applicants and in a few well-publicized instances made unauthorized use of funds—actions that indelibly marked CETA in the minds of many as a poorly administered, wasteful program.

Besides PSE, youth employment initiatives were a major goal of the Carter Administration. A Vice President's Task Force on Youth and a separate youth office in the Department of Labor were established to oversee several new CETA demonstration programs authorized by the Youth Employment and Demonstration Projects Act (YEDPA) of 1977. These programs experimented with new ways to serve both in-school and out-of-school youth, including special efforts to encourage high school dropouts to return to school. In addition, a companion research effort was designed to document the reasons for success or failure in these various efforts.[63]

At about the time CETA was being amended, other legislation authorized tax credits to employers who expanded their work force by hiring poor youths and other groups with special needs. Those credits were the New Jobs Tax Credit of 1977, a $4 billion program not restricted to the disadvantaged, and the Targeted Jobs Tax Credit of 1978 which required more specific targeting on several disadvantaged groups enumerated in the Act.

The final revision of CETA took place in 1978 with several amendments designed to improve program management and CETA's public image. These included limitations on the discretionary authority of local and state governments, changes in PSE eligibility requirements to target only the poor, and the development of a new Private Sector Initiative Program to bring representatives from private businesses into partnership with local elected officials in planning and administering programs. Those revisions were not enough to silence critics of the program, however.

President Reagan came to office in 1981 with what he considered a clear mandate to cut federal social spending. CETA's public image had been badly tarnished by negative publicity alleging wide-spread fraud and abuse, and with little public support and disenchantment even in the Congress, CETA's subsidized employment programs were easily eliminated in 1981. But, the most important issue—whether to continue *any* federal training for the economically disadvantaged—remained unresolved. The matter was all the more urgent because CETA's authorization was scheduled to expire in September 1982.

Once again, the struggle to develop a compromise measure proved arduous. After months of debate, congressional committees were finally able to fashion an acceptable bill that was signed into law on October 13, 1982.

The Job Training Partnership Act

The Job Training Partnership Act (JTPA) was initiated in 1983 after a one-year period of transition from CETA and provides a basic program of training services for disadvantaged youths and adults, a program of retraining and job-search assistance for dislocated workers, a reauthorization of the Job Corps, and the continuation of federally administered programs for Native Americans and migrant and seasonal farm workers.[64]

JTPA gives to states much of the oversight authority once reserved for the federal government, while at the local level private industry councils (PICs), composed mainly of business leaders, share with elected officials the responsibility for administering JTPA programs. In reaction to past CETA abuses, public service employment is prohibited under the Act, and work experience is severely limited. Also prohibited are stipends for participants, although needs-based allowances and supportive services can be offered up to the limit imposed by the law's 30-percent restriction on administrative and support service costs.

Title II-A Programs for Disadvantaged Youths and Adults

In program year (PY) 1986 (July 1, 1987—June 30, 1988), an estimated 796,600 people were newly enrolled in Title II-A programs for the economically disadvantaged, a 1-percent increase over the previous program year (786,400). Of the enrollees, 47 percent were male, 46 percent were minorities, 93 percent were economically disadvantaged, 55 percent were high school graduates, and 41 percent were recipients of public assistance.

JTPA requires that 40 percent of a community's funding for Title II-A programs be spent for services to youths aged 16 to 21, although 14- and 15-year-olds may also participate in preemployment skills training if it is offered locally. About 41 percent of the enrollees, or 327,600 people, in Title II-A programs were under 22 years of age in PY 1987.

Young people may receive any of the services authorized under Title II-A, including classroom skills instruction, on-the-job training (OJT), job-search assistance, work experience, and other support services. Because many young participants are still in school, however, they typically receive part-time work assignments. Seventy-five percent of all Title II-A participants in work experience during PY 1987 were under 22 years of age. In contrast, only 28 percent of all enrollees in OJT were younger than 22. Similarly, within the youth category itself, younger participants (under age 19) predominated in work experience (78 percent), while youth from 19 to 21 years of age were better represented (65 percent) in OJT slots.

Dropouts were a particular concern of legislators when JTPA was enacted. Therefore, the Act requires that school dropouts be served in proportion to their incidence in the local population, although the legislation does not specify the age of this group. A recent special analysis of PY 1985 data, conducted by the National Commission for Employment Policy, found that young high school dropouts have a relatively high participation rate, with more than 28 percent of the eligible population being served. (In contrast, adult high school dropouts are generally underserved.)[65]

There were approximately 763,900 terminations from Title II-A programs in PY 1987; 42 percent (317,300) of the terminees were under age 22, and 27 percent (206,253) were high school dropouts. Young people spent an average of 16.1 weeks in the program, somewhat longer than the average time spent by adults (13.5 weeks). About half (52 percent) of the young terminees found jobs, which paid an average wage of $4.33 an hour (about 78 cents less than the average for adult terminees).

Positive program outcomes for youth are not necessarily limited to entry into employment, but may also include entry into a registered apprenticeship program, entry into the Armed Forces, entry into another employment/training program, return to school, and completion of a major level of education. In addition, positive terminations for youth may include completion of a major program objective for those under the age of 16 (only) or the attainment of youth competencies approved by the local private industry council (usually preemployment skills, basic education skills, or job-specific skills). The positive termination rate for youth under age 22 in Title II-A programs was 75 percent in PY 1987. Nonpositive terminations (dropouts) accounted for about only one quarter of youth terminations in that same program year.

Adult participants, 22 years and older in Title II-A programs numbered approximately 468,900 (59 percent of the total 796,600) in PY 1987. Adults accounted for 62 percent of all classroom trainees, 72 percent of on-the-job training participants, 66 percent of those receiving job-search assistance, and 25 percent of those enrolled in work experience. About 72 percent of adults who left Title II-A programs entered employment in jobs that paid on average about $5.11 per hour (for adult terminees who had classroom training, the average was $5.30 per hour).

Title II-B Summer Youth Programs

The Summer Youth Employment and Training Program provides economically disadvantaged youths work experience and related training and educational services during the summer months. Youths aged 16 to 21 are eligible, although 14- and 15-year-olds may participate if they are included in the job training plan for their local area. During the summer of 1987, about 624,000 young people were provided jobs under Title II-B at a cost of around $706 million. Preliminary estimates for the 1988 summer program show nearly 629,000 youths served with expenditures of around $802 million.[66]

Among the services offered to summer-program enrollees are basic and remedial education, institutional and on-the-job training, preparation for work, job-search and job club activities, and other assistance in preparing for the transition from school to work. Supportive services may also be provided to enable youths to participate in the program. Amendments to JTPA enacted in 1986 require that service deliverers assess the reading and math skills of participants and describe in their local plans how they will spend funds for basic and remedial education.[67] The Reagan Administration's 1989 and 1990 budgets also called for a legislative amendment that would allow service delivery areas to provide, at their discretion, year-round remedial education and basic literacy and skill training, subsidized summer jobs, or both, to economically disadvantaged youth. Congress has not yet acted on this proposal.[68]

Title IV Federally Administered Programs

The Job Corps is one of the oldest federal youth programs, dating from the enactment of EOA in 1964. Offering a program of residential training and comprehensive services for disadvantaged youths between the ages of 14 and 22 (in practice usually only those 16 and older are enrolled), the Job Corps seeks to assist young people who can benefit from an intensive program operated in a group setting.

There are currently 107 centers operating throughout the United States, about 77 of them by businesses and nonprofit organizations under contract to the U.S. Department of Labor. The remainder (30) are Conservation Centers operated in public parks and on other public lands by the Departments of Agriculture and the Interior.[69]

The program year 1988 Job Corps budget totaled $716 million to fund about 40,500 service years of activity. Since most enrollees only remain in the program for around 7 months, however, about 65,000 young people actually participate in the program each year.[70]

Title IV also authorizes federal programs for Native Americans and migrant and seasonal farm workers. The 1988 budget authority totaled $59.7 million for Native American programs, supporting 33,500 participants, and $65.5 million for Migrant and Seasonal Farm Worker (MSFW) programs, supporting 60,000 service recipients. In addition to the regular Indian and Native American programs authorized under Title

IV-A, Section 401 of JTPA, some $13.6 million was authorized for Summer Youth Employment Programs (Title II-B) serving around 13,000 eligible young people on and off reservations.[71]

Conclusions

The JTPA system represents the state of the art in public programming to provide employment and training services for the disadvantaged. It is decentralized because the government has learned that it cannot run programs from Washington. It is structured to encourage strong private participation because legislators have also learned that training outside the context of real jobs is foolhardy. Yet the program demonstrates fundamental flaws. Because funds are limited and accountability is based on the number of people who find work through the program, administrators often concentrate on those clients who can be moved off the unemployment rolls with minimal effort and cost. There is also a temptation to use JTPA monies for training relatively advantaged employees to prevent dislocation or encourage economic development. (Title III deliberately seeks to avoid dislocation by early intervention. Also, linkages between JTPA and economic development are encouraged.)

JTPA programs try to rescue four different kinds of clientele: people who have major human capital deficits and cannot get and keep jobs; poor and unemployed people who are qualified for work but not able to find it; employed workers who need retraining; and employers who need trained employees to be competitive. Thus, the programs' goals include both institutional competitiveness and individual economic independence. The current accountability standard, however, tends to serve the purposes associated with only the second client group—the poor and unemployed who are qualified but cannot find work. As it is presently constituted, JTPA violates a cardinal rule of public policy making: Every policy goal should be matched with its own policy instrument and accountability standard.

Recommendation #14: The basic structure of the JTPA is sound, and the current programmatic emphases should be continued:

- **Responsibility for programs for the disadvantaged should reside with the state and local governments.**
- **Employers should be assigned a substantial role in the planning and oversight of those programs.**
- **Programs should emphasize human capital development through work and learning rather than income maintenance.**
- **Performance standards should be a key operational component.**
- **Programs should provide "one-stop shopping" for clients by coordinating human services at the state and local levels.**

Recommendation #15: The JTPA system should move away from its current "one-size-fits-all" eligibility, treatment, and accountability system. Legislation should separate clients, treatments, and evaluative standards into four groups:

- **The majority of resources should be targeted on people who are poor and unemployed and demonstrate significant human capital deficits. Programs for these people should emphasize human development. Accountability should be based on measured changes in skills. All services should be fully funded by public authorities.**
- **Poor and unemployed people with marginal human capital deficits should be given transitional services, such as job-search assistance and subsidies, to move them into the workplace. Accountability should emphasize transitions into the workplace. Services should be fully funded by public authorities.**
- **Employed workers who need upgrading in order to keep their jobs should be given retraining jointly funded by public authorities and employers. Programmatic accountability should focus on increased employability.**
- **Employers who are allotted public funds to improve their competitive performance should share costs with public authorities. Funding should be available for management development, supervisory training, and technical training (for scientists, engineers, technicians, and craft and skill workers). Funding should not be allowed for executive development or sales training. Accountability should be enforced through matching-fund provisions that stipulate employers should pay most of the cost of the training.**

Welfare Clientele

In 1988, the 100th Congress made the most significant changes in the nation's welfare system in over a century. The fundamental restructuring moved away from income maintenance toward new measures to enforce child support, mandate work requirements, and encourage training. The human capital development provisions included a requirement that each state establish a Jobs Opportunities and Basic Skills Program to provide welfare families with education and training to make them employable. The welfare overhaul is a welcome success after three failed attempts to reform the system over the past 20 years. At the same time, there is a legitimate concern that the new program may create merely another employment and training delivery system if it is not properly integrated with existing programs. To continue the balkanization of programs for the disadvantaged is inconsistent with the reality that the problems of welfare families are multifaceted, requiring a mix of programmatic treatments tailored to the needs of individual recipients and their families.

The federal government is already spending substantial sums in the attempt to salvage the able-bodied poor and provide a second chance for those who have fallen behind. Each year, it spends almost $7 billion on preschool, elementary, secondary, and vocational education; $5 billion on higher education; $10 billion on training and employment; and almost $7 billion on social services. In addition, the federal government spends $2 billion on maternal and child health-care and nutrition, $1 billion for alcohol- and drug-abuse prevention, $23 billion in Medicaid payments for people under 21 years of age, $8 billion for AFDC, and $13 billion in food stamps. Altogether, the federal expenditure for the disadvantaged is more than $75 billion per year, almost $30 billion for education, training, and other forms of human development, and more than $45 billion for health-care and income maintenance.[72]

Although those amounts seem huge, they are less impressive when measured against the size of the target populations. The Women, Infants, and Children Program (WIC), for instance, provided food for 3.3 million low-income, pregnant, and nursing women, but WIC's $1.7 billion expenditure served only half the eligible population. Head Start, a program that provides preschool education for 450,000 children, serves less than 20 percent of the 2.9 million who are eligible. The more than $4 billion spent on compensatory education in elementary and secondary schools serves less than half the people who are eligible. JTPA, the principal second chance program, funds fewer than 5 percent of the eligibles.[73]

Entitlement spending reduces the funds available for attempts to reduce public dependency among the disadvantaged. In programs such as Medicaid and AFDC, spending is uncontrollable because recipients who meet eligibility requirements are entitled to program services. In contrast, programs that provide human capital development are funded annually at levels set by the Congress. Even middle-class entitlements, such as social security, squeeze available funds for discretionary spending for human capital development.

The squeeze could not come at a worse time. For the first time in memory, human capital deficits now stand as the primary barrier to including the disadvantaged in the nation's work-based culture. The explanations for poverty and public dependency popular in the 1960s and 1970s are increasingly irrelevant. In those decades, there were not enough jobs. There was a big push for education and training, but education and training do not create very many jobs. Jobs create the need for education and training. Now jobs are available, and employees need the educated and trained labor to fill them. Human capital development strategies will work for clients who have a job prospect in hand because they can expect economic rewards for learning.

There is more at stake than the future of the disadvantaged. The entry-level work force is declining in both quantity and quality as more and more new employees come from disadvantaged populations in which prior human capital investments have been insufficient. We will increasingly recruit our human resources to compete in the international economic struggle from disadvantaged populations. The nation's commitment to equal opportunity has found common cause with the emerging competitiveness agenda.

Recommendation #16: In order to provide human capital development at resource levels that can make real improvements in the employability of the disadvantaged—

- **eligibility requirements should distinguish carefully between people with developmental deficiencies and those who require less extensive services;**
- **programs should offer a sequence of treatments from basic human capital development to transitional services, such as job-search assistance and hiring and training incentives for employers;**
- **accountability standards for developmental programs should emphasize measured progress in skill acquisition and employability; and**
- **accountability for transitional services should emphasize job placements and job tenure.**

Recommendation #17: Services for the disadvantaged should be delivered in the context of mainstream institutions. Programs should be predicated on the principles that the best social welfare agency is a family, the best teacher is experience, and the best trainer is a job.

Recommendation #18: In order to utilize existing resources more efficiently and provide comprehensive services, services should be delivered in coherent packages tailored to the needs of individual clients. This approach will require—

- **common intake and eligibility criteria to provide "one-stop shopping"; and**
- **programmatic accountability that focuses on the progress of clients, rather than the delivery of a particular service.**

Dislocated Workers

The process that generates dislocation is reasonably straightforward. Increased competition accelerates the penetration of technology into work environments. New technology eliminates some jobs, leaving fewer jobs for more highly skilled workers who use more machinery. Because these effects occur across whole industries and whole occupations, dislocated employees find it difficult to find similar jobs immediately. They can pursue one or a mix of three basic strategies. First, they can wait and see. Productivity improvements in the industry they left may ultimately increase market share and result in rehiring, as happened in the auto and other industries over the past decade. In addition, turnover can generate up to 20 percent rehiring in many industries over a five-year period. Second, dislocated workers can retrain for new jobs at similar or better wages. Most such jobs, however, are in highly skilled occupations outside the dislocated workers' current occupations and retraining requirements for those jobs are extensive. Moreover, such jobs require not only extensive retraining, but also learning whole new occupational and industrial cultures. Third, dislocated employees can accept new jobs that are relatively less skilled and pay lower wages.

Most dislocated workers in the United States have combined the first and third strategies. Dislocated manufacturing workers, who are the vast majority of dislocated workers, accept lower-paying service or industrial jobs at lower wages and wait for preferred jobs to pop up. The majority regain their prior wage level five years or so after dislocation, but well over a third never do.

It remains to be seen whether the current dislocation will extend beyond the manufacturing sector. Manufacturing has been hit hard by foreign competition and the technical changes competition has inspired. Moreover, manufacturing jobs are unique in that they are relatively well paid for the skills required. As a result, the manufacturing worker is not prepared for other well-paid jobs, because they have skill requirements far beyond his or her current skills. The new service jobs do not have prohibitive skill requirements, but they do not pay very well either.

Ameliorating worker displacement has been a theme in federal employment policy since the passage of MDTA in 1962. MDTA's concern for displacement was based on a much debated expectation that automation would replace many workers and on the belief that the Kennedy round trade negotiations would exacerbate displacement. MDTA was amended shortly thereafter and retargeted to disadvantaged clientele. Eventually, the spate of targeted programs that followed was consolidated into CETA. As CETA evolved, providing training and employment for the disadvantaged became its principal purpose; aiding dislocated workers became a minor aim. Provisions in the Trade Expansion Act of 1962 to provide adjustment assistance to workers displaced by foreign trade also lay dormant until trade negotiations heated up again in the early 1970s. The Trade Act of 1974 liberalized benefits and eligibility, and payments to workers dislocated by trade policies increased rapidly under Trade Adjustment Assistance (TAA) in the late 1970s, until they peaked at $1.62 billion in 1980.[74] Over the same period, 22 other readjustment programs were authorized to provide income support and benefits to employees dislocated from specific economic sectors, especially in transportation and communications.

In the early 1980s, those programs came under considerable criticism for supplying too much income support and too little adjustment. As a result, the TAA legislation was amended to reduce payout substantially. Benefits did not exceed $75 million in 1983.[75] Major responsibility for adjustment through job-search assistance and training was shifted to JTPA. Title III of that Act established a 50-percent federal/state cost-sharing program to aid dislocated workers, although the matching requirement has since been dropped.

The extent of dislocation in the future remains uncertain. As shown above, evidence suggests that dislocation will remain a relatively limited phenomenon. At the same time, however, unmeasured and elusive trends in technology and trade could displace substantial numbers of employees in other specific industries, areas, and occupations.

The current uncertainty about the future of displacement suggests a flexible response. Assistance-delivery systems that can expand and contract with demand (much like the unemployment insurance system) would be capable of responding to displacement, whatever its scope. Experience to date also points to systems that emphasize early identification of dislocation and offer services (such as skills assessment and job-search assistance) that encourage dislocated employees to come to grips with their prospects quickly and begin the unavoidably traumatic transition to a new and probably lower-paying job. Prior notification of plant closings is helpful in that regard but is difficult to achieve because most closings involve very small firms or sudden changes in business conditions.

One flexible approach is the development in some states of "gentlemen's agreements": Firms over a certain size or industries critical to the economy of the state agree informally with the state to give as much closing notification as they can. These agreements are less threatening to business because of their informality, and that same informality allows for flexibility in the use of available state resources in order to avoid layoffs or to provide assistance where shutdowns or major layoffs are imminent.

The Canadian Manpower Consultative Service (MCS), for example, offers a model of flexibility and effectiveness.[76] The MCS assists managers and workers in firms that are experiencing significant instability or dislocation. Its format works informally and can customize a variety of financial and labor-market services for troubled firms, services aimed at salvaging jobs and capital. It salvages the firm or profitable portions of it in order to preserve as much of the original employment base as possible. Wherever it can, it assists workers targeted for displacement while they are still employees. The MCS model could be integrated effectively into the American system if it were tied to unemployment insurance, which expands and contracts with use more easily than appropriated and administered programs.

The two major programs in the United States for assisting dislocated workers have been Title III of JTPA and Trade Adjustment Assistance (TAA). Title III programs enrolled 98,200 new participants in PY 1987, a decrease of about 8 percent from the previous year (106,700). The majority were male (70 percent), white (76 percent), between the ages of 22 and 44 (62 percent), and high school graduates (84 percent). The overall median length of stay in the programs was about 16.3 weeks, with 76 percent (70,700) of the 93,600 terminees entering employment at an average hourly wage of $7.40 (an increase of 14 cents over the average wage in the previous year).[77]

Under the terms of the Trade Act of 1974, TAA benefits, including unemployment compensation, training, and related employment services, are due to workers adversely affected by increased imports of articles similar to those produced by the workers' firms. On the basis of an individual employability plan developed by local Job Service staff, each eligible worker may be referred to institutional or on-the-job training or both in an occupation with a reasonable expectation of employment after training. A relocation allowance may be provided if the worker receives a bona fide job offer in another community.

The current set of policies have been refined in the recent Omnibus Trade and Competitiveness Act of 1988. The new legislation authorizes income support to reduce income losses that result from either accepting a lower-wage job or accepting training in order to secure a higher-wage job later on. The Act also provides for transitional services, such as prior notification and job-search assistance, to get the inevitable adjustment process going. In the future, should dislocation move into the service sector, the same mix of services would be appropriate, although income support would be less of a factor because service workers generally earn less than manufacturing workers.

The TAA program has been revised in the new trade law to include more training and less income maintenance. With new appropriated resources, the current mix of TAA and JTPA should be sufficient to provide effective programs to serve the roughly one million experienced American employees who are dislocated each year.

Further changes in federal legislation are required. More experimentation and dissemination of models for flexible and tailored responses to large-scale dislocation at the state and local level are in order. In addition, current demonstration programs experimenting with proposals for expanding the uses of the $30 billion unemployment insurance system beyond its current emphasis on income maintenance are worthy of consideration. Here are three recommendations for crafting future programs for the dislocated:

Recommendation #20: The nation should set a higher hitch in the safety net for dislocated employees and help them avoid a free fall from middle-class status to official poverty.

Recommendation #21: Prior notification, counseling, job-search assistance, and outplacement should be encouraged while employees are still on the job.

Recommendation #22: Dislocated employees should receive counseling and job-search assistance first, and then training when a job prospect is evident or in hand. If possible, they should receive training on the job.

PART III

INTERMEDIARIES

Although all of the systems described in the preceding pages work to inculcate the basic literacy and occupational skills entry-level workers need to perform on the job, making the leap from school or training program to the job is almost always a difficult transition. Of the forms of training described, apprenticeships probably provide the smoothest transition to employment because of their built-in progression from entry-level worker to skilled craft worker.

Unfortunately, apprenticeships are limited to specific kinds of occupations—primarily the building trades—and despite efforts to overcome and prevent discrimination, they tend to enroll primarily white males. In addition, apprenticeship programs tend to favor applicants who are in their mid-20s and are clear about their career paths. They do not tend to take on young people directly from high school—less than five percent of high school graduates participate in apprenticeship programs in the first year after graduation, and only one to two percent participate in the third year after graduation.

For people who are entering the work force for the first time and who are not enrolled in an apprenticeship program or similar activity, there is no prescribed pathway to an occupation or career. In fact, "job hopping" and temporary spells of unemployment are generally considered part of a youth's rite of passage into adult jobs.

There are, however, a number of programs and institutions that attempt to expedite the transition for young people and other entry-level workers. Such institutions are not present throughout the country, however, nor are they uniformly effective.

Public and Private Employment Agencies

Probably the oldest transitional institution in the United States is the system of public employment agencies. Since the 1930s, the principal provider of publicly supported job-search assistance has been the U.S. Employment Service (or Job Service, as it is now called in most states). The Job Service is a federally funded, state-administered system, with approximately 2,600 offices operating throughout the country.

Under the terms of the Wagner-Peyser Act of 1933, anyone who is legally qualified to work in the United States is entitled to receive, without charge, services that range from aptitude testing and vocational counseling to job development and placement. Each year, about 16 million people seek help through local Job Service offices, and about six million job openings are filled. Additional services such as job analysis, studies of turnover and absenteeism, and assistance in job restructuring are offered to employers along with help in filling their job openings. Finally, the Job Service has a major recruitment role for several federal employment and training programs, such as JTPA and WIN.

In contrast to the public employment service, which must by law accept all job seekers regardless of skill or aptitude, private employment agencies often specialize in particular fields and prescribe the level of education or other characteristics required of applicants. The number of private agencies, which include large, nationwide temporary help firms as well as exclusive executive search agencies, appears to have increased substantially over time. Although the exact number of agencies cannot be determined, one estimate is that there are around 17,000 private employment agencies and 1,100 executive search firms located throughout the country.[78]

In addition to activities that relate directly to job placement, there are a number of other programs, both public and private, that are designed to provide young people in particular, but other entry-level workers as well, with the experience they need to find career paths that suit their personal needs. Some of these programs offer career information and counseling; others provide work experience through internships or preemployment training; and still others offer incentives to continue education or training.[79] Examples of these various programs are discussed in the following three sections.

Occupational and Career Information

In addition to providing job placement services through local Job Service offices, the federal government funds programs to help people make informed choices about career decisions. For example, the National Occupational Information Coordinating Committee (NOICC) and its counterpart state committees (SOICCs) are authorized under the Vocational Education Act. NOICC, whose members are officials of the U.S. Departments of Labor and Education, is responsible for coordinating federal, state, and local efforts to improve occupational and career information activities at all levels of government.

Among the projects NOICC has funded is the Career Information System grants program, which uses a multimedia approach (computers, microfiche, and printed material) to provide information about occupations and careers. A number of states have used this prototype to develop occupational information systems of their own, using state and local funding.[80]

Jobs for America's Graduates (JAG) is an effort designed to assist high school students in making their way into the job market. The program serves students who have been identified as potential dropouts. JAG offers instruction in career planning, job-seeking skills, personal development, and other work-related skills, as well as job development and placement assistance provided by professional job specialists and membership in a Student Career Association. Follow-up support is provided for nine months after graduation.[81]

Internship Programs

The Career Intern Program, which was developed by the Opportunities Industrialization Council in Philadelphia with financial support from the National Institute of Education, is another example of preemployment assistance directed specifically at dropouts or potential dropouts. Participants receive a combination of classroom instruction oriented toward occupations and supervised work experience, accompanied by career counseling and social services, which extend for six months to a year after participants either find jobs or decide to continue their education. The concept was spread to other cities as one of the Department of Labor's YEDPA demonstration efforts.[82]

Similar kinds of internship programs not directed exclusively to youths at risk include New York City's Executive High School Internship program and the National Institute of Education's model Experience-Based Career Education (EBCE) program. Teacher-coordinators supervise placements and lead seminars to reinforce what is learned. In the New York City program, youngsters are paired with executives who act as role models and provide career information. EBCE participants change placements frequently to get a wide range of experience in both blue-collar and white-collar jobs.[83]

Incentive Programs

Some programs designed to provide preemployment experience and career information also offer incentives to remain in school. One of the best known programs, The Boston Compact Project, which began in 1982, is an effort to bring together the resources of the public schools and the business, university, and labor communities to improve students' academic achievement and work preparation. The Compact, as its name implies, is a formal, objective-based agreement that stipulates the contributions each entity will make to improve educational performance, school attendance, and post-high school opportunities.

In 1982, Boston public schools had a 16 percent annual dropout rate, with less than 60 percent of any entering high school class remaining long enough to graduate. Under the terms of the Compact, the schools agreed to reduce the dropout rate by five percent annually and to work toward increasing attendance and test scores. Businesses agreed to give priority hiring status to a specific number of graduates, to increase the number of summer jobs for students, and to sign up at least 200 companies for a priority hiring effort. The Compact was later expanded to include colleges, which agreed to increase their enrollment rate among Boston public-school graduates by 25 percent, and labor unions, which pledged openings in apprenticeship programs to graduates on the condition that the schools offer union-designed training curricula.

Currently, two initiatives are under way to address the dropout problem in Boston. First, the school system is attempting to create a dropout prevention plan that will bring in community resources and deal with structural barriers to school retention. Second, Compact Ventures, a pilot program sponsored by the Boston Private Industry Council in cooperation with the schools, offers supportive services and employment incentives to high-risk ninth-graders in two schools.

The Boston Compact has generally been considered a success, although it has proven most adept at increasing the employment of high school graduates. About one-third of the graduating class of 1986 found jobs through the Compact, many in banks, insurance companies, and hospitals, at wages that averaged $5.43 per hour. Some progress has also been made in improving attendance and academic achievement, but the dropout rate remains unchanged. The Boston economy has been thriving in recent years, and it is open to question whether the Compact will prove equally effective in a slower labor market.[84]

Building on the Compact's strengths, seven other cities (Albuquerque, Cincinnati, Indianapolis, Louisville, Memphis, San Diego, and Seattle) have also initiated similar projects, tailored to their individual communities, as part of a nationwide demonstration program. Funding for the seven projects is supervised by the National Alliance of Business, and is provided by the U.S. Departments of Labor and Health and Human Services, along with grants from the Reader's Digest Foundation and the MacArthur Foundation. Each participating city is working toward implementing formal, written compacts between public schools and business, government, and higher education. The agreements will specify overall goals for each city and assign responsibility for attaining those goals to the various parties to the agreements.[85]

As a more personalized incentive effort, New York businessman Eugene Lang, who "adopted" a sixth-grade class in East Harlem has guaranteed those children funding for college or other continuing education. Business philanthropists have followed suit in Dallas, Boston, the District of Columbia, and other communities around the country.[86] Although dependent on the goodwill of wealthy individuals, such programs offer hope to young people who remain in school and prepare for postsecondary education and training.

Recommendation #23: Federal and state governments should encourage state and local experimentation and partnerships between employers and state and local authorities to promote better job-related information and more effective transitions from schooling into the workplace.

PART IV

LEARNING ON THE JOB

Employers are the principal providers of job-related learning that qualifies Americans for their jobs and upgrades then once they are on the job. As Table 4 shows—

- Only 55 percent of Americans get education or training that helps them qualify for their jobs. Schools provide some or all of the qualifying training for 29 percent of Americans. By comparison, 26 percent get some or all of their qualifying training informally from their employers, and 10 percent get some or all of their preparation for work through formal, employer-provided training.
- Only 35 percent of Americans get upgraded once they are on the job. Schools provide upgrading for 12 percent of Americans, and employers provide formal upgrading for 11 percent and informal upgrading for 14 percent.

If anything, Table 4 understates the employers' role. Employers not only provide formal and informal training on the job, they also pay for eight percent of the schooling used by their employees to qualify for jobs and 41 percent of the schooling their employees use for upgrading.

As discussed elsewhere in this monograph, employer-based learning has a much more powerful impact on earnings than any other kind of learning, including schooling. The earnings returns from employer-based learning are at least three times those from schooling, probably because employer-based learning, when done well, is provided in an applied context.

Employer-based learning is also critical to the competitive performance of American institutions. The productivity returns to learning on the job are twice those due to increased levels of education and almost three times those due to new technologies. The ability to teach employees and learn from them will only become more important because—

- innovations, cost efficiencies, quality improvements, and new applications for existing technologies are increasingly derived in the workplace in the process of making and delivering products and services;[87]
- new technology increasingly pushes autonomy and control of efficiency, quality, and innovation down the line toward the mass of employees at the point of production and service delivery;
- technology and financial capital are ever more footloose, and competitive advantage increasingly resides in the ability of organizational structures and the people in them to accumulate new knowledge in the workplace and turn it into salable innovations in the marketplace; and
- there is not much profit in major university-based technical breakthroughs—all the real profit is in getting the big idea to market fastest, making little improvements, and finding new applications for the original innovation.

The ability to learn and teach in the workplace is also critical because the worksite is the nation's first listening post for new knowledge and changing skill requirements. Technical and economic change usually comes in small bites on the job. Eventually, the incremental changes accumulate to the point where they add to the store of knowledge and require significant skill changes. Employers need learning systems to capture new knowledge and teaching or training systems to teach new skills. In addition, the nation needs strong linkages between employers and external institutions in order to transmit workplace learning and changing skill requirements. External R&D institutions need to be linked to what is learned in the workplace because they are responsible for integrating new knowledge into the current store of learning and disseminating new knowledge in the society at large. Education and training institutions outside the workplace need to be linked to the processes of skill change on the job in order to prepare people for work and help upgrade them.

TABLE 4

SOURCES OF QUALIFYING AND UPGRADING TRAINING

Occupational Group	Percentage With Qualifying Training				Percentage With Upgrading			
	Total	From School	Employer-Based		Total	From School	Employer-Based	
			Formal	Informal			Formal	Informal
All employees	55	29	10	26	35	12	11	14
Nontechnical professionals	92	87	6	16	47	47	10	11
Management support specialists	77	52	11	38	52	20	20	17
General managers	71	43	12	39	47	18	17	16
Clerical workers	57	33	7	31	32	10	10	15
Sales workers	43	15	12	28	32	7	13	15
Service workers	36	13	9	18	25	7	8	12
Transportation workers	36	2	8	26	18	2	6	9
Machine operators	37	6	6	26	22	3	4	16
Laborers	18	2	2	13	14	2	2	10
Technical professionals	94	83	14	23	63	25	23	17
Technicians	85	58	14	32	52	20	18	19
Craft workers	66	11	16	44	26	7	7	13
Precision production workers	61	17	15	38	36	8	13	18
Mechanics and repairers	68	19	18	39	44	7	22	17
Extractive workers	56	4	13	48	34	6	13	18

Note: Some individual percentages add up to more than the totals because some employees received training form more than one kind of source.

Source: Carey, Max. Bureau of Labor Statistics, U.S. Department of Labor, *How Workers Get Their Training* (Washington, DC: U.S. Government Printing Office, 1985).

Assessing Workplace Learning

Although learning on the job is the dominant mode for preparing for work and the most effective way to learn applied knowledge, Table 4 shows that only small percentages of Americans get any qualifying training or upgrading from their employers. Moreover, anecdotal evidence suggests that most workplace teaching systems are weak, and workplace learning (R&D) systems are weaker still.

Why do employers invest so little in learning? The principal reason is because it is difficult for them to capture the benefits of their investments. Most employer-based learning teaches generic skills (a trend that is intensifying as technology upskills jobs, demanding more of those skills from employees). The principal beneficiary of employer-based learning is therefore the trainee, who can use learning on the job to get new and better jobs. That, after all, is how most people progress in their careers.

Another reason that employers invest so little in training is because other employers who do not invest in training can pirate trained employees away with salary increases. For instance, suppose an employer invests $5,000 in training an employee, and a second employer invests $1,000 in a wage increase to lure away that employee. The employee picks up $5,000 in increased human capital and another $1,000 in wages. The new employer gets $5,000 in human capital for $1,000, and the employer who provided the training loses a $5,000 investment.

The other beneficiary of employer-based training is society as a whole. As noted, the productivity returns to learning in the workplace are much greater than the returns to other kinds of investments, yet a substantial share of those returns accrues to the economy as a whole and not to the employer who funds the training. Available analyses suggest that the societal benefits from employers' investments in R&D are anywhere from two to four times the returns to employers. The ratio of employer benefits and societal benefits from workplace training are probably similar.[88]

Employers are also discouraged from investing in training because training often does not deliver the desired changes in competency or behavior. As in the case of employer-sponsored R&D, some investments will pay off, but employers do not know which ones. Much of employer training attempts to respond to unprecedented learning needs, and is, therefore, to some extent experimental. Moreover, human development is unpredictable. In the words of former Secretary of Labor Ray Marshall, "We know that human capital investment works. But we don't understand what we know." Evaluation of education and training programs shows over and over again that everything works some time and somewhere, but nothing works every time and everywhere.

High cost is another disincentive for employers to invest in training. Bishop found that on-the-job training during the first three months of employment costs employers an amount equivalent to 80 percent of the output of an employee with two years' experience.[89] Costs are incurred in both the development and delivery of training, and development costs alone can be expensive. Rules of thumb on the expected ratio of development to delivery time for different instructional methods are in Table 5.

TABLE 5

CURRICULUM DEVELOPMENT HOURS VS. DIFFERENT INSTRUCTIONAL METHODS

Instructional Method	Ratio of Curriculum Development Hours to Delivery Hours
Classroom instruction	50–1
Self-paced instructional materials	100–1
Computer-assisted instruction	150–1

Source: Compiled from Head, G. *Training Cost Analysis: A Practical Guide.* (Washington, D.C.: Marlin Press, 1985).

As discussed previously, the most effective training is delivered in the context of the job itself, but developing applied training programs can be time-consuming and therefore expensive as Table 5 shows. The process begins with an analysis of the skill requirements for the jobs and matches those requirements against the skills of the employees. Training programs are then targeted at the performance gaps that are discovered. Ideally, the programs are designed and delivered in the medium that most closely simulates work processes, and sometimes the medium itself can be very expensive. The current shift toward computer-based simulations is a case in point. Table 6 shows the average costs for developing a computer-based training program.

TABLE 6

COST FOR DEVELOPING A COMPUTER-BASED TRAINING PROGRAM

Equipment and materials	$176,843
Project leader (90 days)	15,500
Instructional designer (150 days)	20,832
Subject-matter experts (20 days)	2,666
Total	$215,841

Source: Compiled from Head, G. *Training Cost Analysis: A Practical Guide.* (Washington, D.C.: Marlin Press, 1985).

The costs of delivering training include direct costs, overhead, and the costs of taking people away from their jobs to train.[90] Anecdotal evidence suggests that the direct costs of training—costs of personnel, materials, and facilities plus per diem expenses—are only 25 percent of the real delivery costs. Overhead costs are at least equal to the direct costs. The least visible expense of delivering any training program is the cost of taking the employee off the job. "Lost-opportunity" costs include the wages that must be paid while the employee is being trained and the productivity that is lost because the employee is off the job.

How much does it really cost employers to train? The direct cost of training one employee for one day is a minimum of $250. Overhead costs add another $250, and lost opportunity costs another $100. Thus, the true cost of training one employee for a full day is at least $600. If an employer has 500 employees and gives each of them five days of training each year, training will cost at least $1.5 million per year. Given that the costs are high and there is no guarantee of returns, it is easy to understand why so few employers provide workplace training.

A variety of consequences result from the current underinvestment in employer-based learning. The most far-reaching effect is that learning has insufficient status in employer institutions at a time when a volatile mix of technical, economic, and demographic changes are making the ability to learn in the workplace increasingly critical to competitive advantage. At present, with the exception of a relatively small number of progressive institutions, employers' commitment to learning is the missing link in the nation's human capital development system. The United States invests heavily in formal education to prepare people for work, but selection for jobs, appraisal on the job, rewards on the job, and strategic thinking in the workplace do not make proactive use of human capital. The nation's current human capital strategy is all wind-up and no pitch.

The current underinvestment in employer-based learning systems also results in weak linkages between employers and external education institutions, which in turn slows the ability to transfer new skill requirements and new knowledge from the workplace to teaching and R&D institutions. Weak linkages also frustrate translating academic knowledge into useable product.

The high cost of employer-based learning relative to expected benefits to the employer also affects the quality and distribution of training negatively. Because development costs are high, employers often use canned programs rather than training that simulates the job and the institutional environment. Because delivery costs are high, there is a tendency to rely exclusively on informal on-the-job training. These factors play an especially large role in small employer institutions, which cannot spread development or delivery costs across a broad array of employees and cannot afford to take employees off the job for training.

High training costs also tend to limit training to white-collar and technical elites (see Table 4). In traditional top-down institutions, those people have the most control and are the best bets for high returns on training investments. Because they have the most educational preparation, they are assumed to be the most trainable personnel as well. As nonsupervisory employees become more important, training is being extended to a broader base of employees, but cost pressures have frustrated the extent of this democratization—to the detriment of the institutional competitiveness of American employers and the career development of American workers.

Private Strategies

The principal challenge for increasing and improving workplace learning lies with American employers. Each employer's training needs are different, and there is no single level of commitment to training appropriate for all employers. How much training should the nation's employers provide? It is difficult to say. The current commitments to formal learning, whether it's delivered through job rotation, mentoring, self-study, classroom training, or any other delivery method is insufficient. The current overall financial commitment is less than two percent of payroll, and covers only slightly more than 10 percent of employees, is substantially below commitments in the nation's more successful employer institutions. To increase formal workplace learning, employers should set a target of four percent of payroll, which is in line with current commitments in institutions that utilize training effectively. A four-percent target, however, more than twice the current commitment, cannot be achieved with any degree of quality any time soon. As a result, we would suggest the need to increase financial commitments to training in two phases.

Recommendation #24: The employer community should set an interim target of spending two percent of payroll nationwide, or an increase of $14 billion over current expenditures, for training and development. The interim target would increase total commitments to $44 billion and increase coverage from the current 10 percent of employees to almost 15 percent.

Recommendation #25: Employers should set an ultimate goal of spending four percent of payroll nationwide, or an increase of $58 billion over current commitments, for training and development. The final target would increase commitments to $88 billion and increase coverage from the current 10 percent to almost 30 percent of employees.

In addition to increasing resource commitments, employers will need to integrate their human resource development structures into institutional culture and structure—

- to accelerate and cushion the impact of change;
- to encourage learning that drives efficiencies, quality improvements, new applications, and innovations;
- to reduce the time it takes to get innovations to market;
- to encourage flexibility rather than resistance to change; and
- to provide products and services tailored to customers' needs, as well as good customer service.

As stated earlier, employers will need to push the human resource development activity as close as possible to the point of production and service delivery, and to the interface between the institution and its suppliers and customers. Technical changes have their greatest effect on production and service delivery employees. As a result, those employees have much to learn. They also have much to teach because their hands-on experience with the product and customer contact make them prime experts and the frontline listening posts for new efficiencies, quality improvements, new applications, and innovations. After all, the people who use products and services—the customers—know most about products' and services' strengths and weaknesses and should be listened to carefully.

Recommendation #26: Human resource development should be integrated into the employer institution. Success in this effort will require the following:

- **leadership—the CEO must make training a priority;**
- **institution building—the training and development executive must be a full member of the senior management team;**
- **integration—line managers throughout the institution must be responsible for training and developing their subordinates; and**
- **accessibility—training must be available to all**

employees and not just white-collar and technical elites.

The state of the art in workplace learning far exceeds the state of practice. Employers need to bring the practice into line with the art.

Recommendation #27: Employers should—

- **treat training as an investment with the same payoff as R&D; and**
- **share with one another development and delivery costs of training materials, technologies, and basic research on applied learning among adults.**

The fundamental pedagogical strength of employer-based training is that it can be applied. Applied learning works best because it embeds new knowledge in a context that is meaningful to the learner. New knowledge delivered in the context of work activities motivates learners and can be practiced immediately. Yet all too often, employers do not use their natural pedagogical advantages, but rather transfer the deductive methods characteristic of the schools.

Recommendation #28: Employers need to use an applied pedagogy in developing workplace curricula. To the extent possible, learning should be embedded in work processes.

The most profound challenge facing American employers is to give learning itself more standing in the workplace.

Recommendation #29: Employers should create two kinds of learning systems:

- **a training and development structure that teaches employees required new skills; and**
- **a system that allows employers to learn from their employees in order to capture cost efficiencies, quality improvements, new applications, and innovations that employees discover during the production, testing, and use of products and services.**

Recommendation #30: To give teaching and learning more standing in the American workplace, employers should connect them to performance-based selection, appraisal, and rewards. Employers need to—

- **communicate work requirements to educators and select new employees on the basis of their academic performance;**
- **include appraisals with a training and development plan to improve performance; and**
- **reward employees for learning and for contributing new knowledge that results in cost efficiencies, quality improvements, new applications, and innovations.**

Improving Linkages

Learning all by itself has little economic value. In order to gain value, learning needs to be linked to real world applications and to the performance of individuals, working teams, and whole institutions. The first link in the chain occurs in the development, delivery, and evaluation of the learning experience itself. As discussed above, the most effective learning experiences are those that are developed, delivered, and evaluated in an applied context. Learning experiences developed in an applied fashion have the best chance of affecting performance. They are least expensive when delivered on the job because employees are not removed from the worksite, reducing productivity losses, travel costs, and replacement costs. Also, learning that is embedded in work processes engages the learner best because it provides an obvious connection between knowledge and job responsibilities. An applied approach to learning also provides immediate application and practice in the use of new knowledge. Finally, learning that is evaluated on the job ties learning experiences to performance.

Employers can build state-of-the-art systems for training and extracting knowledge from employees, but if learning systems are not linked to hiring, evaluation, and reward systems, they will have little impact. This second link in the chain, the link between learning and human resource management practices, is all important. When people are selected for jobs, their skills need to be matched with the skills required to perform the tasks that comprise the job and the roles required to be an effective member of the working team. Any gap between the skills required and the skills of the job applicant need to be closed with some kind of tailored learning experience. Effective selection presumes employers will use state-of-the-art techniques to analyze jobs and job applicants and design learning experiences that result in an effective match between jobs and people. Much the same is true for performance appraisal and reward systems. Performance appraisals should specify performance problems and specify learning treatments to close performance gaps. Rewards should be predicated on performance.

The third link in the chain is between human resource management and the strategic change processes in employer institutions. The use of human resources ought to be on a par with the use of financial, technical, and marketing tools in meeting the strategic goals of employers. As discussed previously, the effective utilization of human resources in the workplace will require at least two kinds of learning systems: a teaching system to upgrade skills continually to match new job requirements and a learning system to extract new knowledge from employees in order to improve efficiencies and quality and to develop new applications and innovations. Without such teaching and learning systems, the rate at which the employer responds to competitive changes will be slowed, and the ability to innovate will be reduced.

In addition to linking learning to jobs, human resource management systems, and strategic change processes inside the workplace, employers will have to link to institutions outside the workplace as well. The importance of external linkages stems from the fact that the performance of every employer depends on a complex network of other employers who provide critical manufactured items and services. The ski resort operator relies on equipment manufacturers as well as food service vendors and hotel operators to deliver a recreational service called skiing. To produce and deliver a car, the car manufacturer relies on equipment suppliers in manufacturing, raw material suppliers in extractive industries, and dealers, financiers, and marketers in service industries. Almost every employer is a member of a complex network of service, manufacturing, and extractive institutions. In the final analysis, the quality of performance in the entire network determines the competitive performance of the network's individual employers. As a result, every employer needs to establish effective linkages within its network of suppliers in order to assure that training and learning systems are in place that will guarantee state-of-the-art components and services and, therefore, assure the overall quality of the employer's final product.

Employers also need to link with external education and training institutions in order to guarantee a quality supply of entry-level employees and to assure a high-quality supply of upgrading training for existing employees, should the employers want to buy training rather than provide it internally. The linkages to external education and training institutions are of growing importance for a variety of reasons: First, the number of 16-to-24-year-olds is declining and is increasingly made up of people in whom our previous human development investments have been insufficient. At the same time, skill requirements for work have been increasing. The resultant scarcity of qualified entry-level employees will require that employers take a greater interest in the effectiveness of education and training institutions outside the workplace to prepare young Americans for work.

A second reason that employers will need stronger linkages to external education and training institutions is to insure the quality of their temporary employees. As economic and technical change accelerates, markets expand and contract with remarkable speed. As a result, employment security has been reduced for many employees, and more and more employers have created two-tiered work forces. One tier includes a core group of permanent employees who remain with the employer through thick and thin. The second tier is made up of employees who are hired as needs dictate; their number increases or decreases with demand for the employer's products or services. Employers have little control over the quality of their flexible work forces. Moreover, as the available labor pool becomes smaller and increasingly made up of the unprepared, the quality of that flexible labor pool will surely decline.

The current benefits debate complicates the picture. One reason employers streamline their permanent work force is to save on rising benefits costs. Current legislative efforts are likely to extend health, pension, parental-leave, and day-care benefits to more employees and to make those benefits portable. To mitigate their costs in supporting those benefits, employers will want to keep their work forces at a minimum, which will create a greater dependence on external suppliers to provide them with well-educated and trained temporary employees.

Ultimately, it is in the interest of all the employers to assure efficient and timely learning of new skills and to absorb new knowledge as quickly as possible. Strong linkages among employers in the same economic networks and between employers and external education, training, and R&D institutions can accelerate the transfer of learning to everyone's advantage. In addition, to the extent employers share the generic new learning with other employers or external education and training institutions, they can—

- reduce their own training and R&D costs;
- improve the quality of learning among other employers critical to their own success; and
- improve the quality of education, training, and R&D in external education and training institutions on which they rely for entry-level preparation, upgrading, and basic R&D.

In order to develop successful linkages, employers need to be able to distinguish between new learning that is useful only to them and the more generic kinds of new learning that is useful to their suppliers and external education and training institutions. The process of skill change is a case in point. Skill changes in the workplace usually occur incrementally. Initially they are learned informally, but when a sufficient amount of new skill requirements accumulates and enough people are affected, a formal training program can be built. If an employer is experiencing sufficient skill change to justify a training program, the odds are great that the need extends beyond that particular individual employer institution. Some of the training needs will be specific to the culture and competitive niche of the employer, but some of it is likely to be generically applicable to the needs of other employers or even to the preparatory education and training of entry-level employees in the affected occupations. At that point, it is in the employer's interest to share the costs of the generic training with other employers or external education and training institutions.

Linkages that would encourage employers to share new learning more quickly would provide both public and private benefits. Individual employers could reduce costs and get a higher quality of learning. The public benefits would come in the form of higher productivity in the economy as a whole, resulting from the quicker transmission of new learning among employers and between the workplace and external education, training, and R&D institutions. Linkages that encourage employers to share generic training might be especially helpful in the current economic context. New technologies have reduced the job-specific content, and increased the generic skill requirements, in a vast array of jobs. That trend toward generic skills suggests the possibility of offloading a substantial amount of training that is currently provided formally or informally on the job.

Recommendation #31: Workplace learning needs to be closely linked to the performance of individuals, work teams, and strategic change processes in employer institutions. In order to encourage more effective external linkages, employers need to—

- **embed learning in work processes;**
- **connect learning to performance-based selection, appraisals, and rewards systems in the workplace; and**
- **build a stronger link between learning and human resource management and the strategic goals of employer institutions.**

Recommendation #32: Employer strategies and government policies need to be developed to link employers closely to their networks of suppliers and to external education, training, and R&D institutions. More specifically—

- **employers should set performance standards linked to learning systems for supplier institutions;**
- **employers should require that suppliers provide quality training to customers to assure effective use of supplier equipment, components, or services; and**
- **employers and the government should provide resources to conduct R&D on best learning practices linking employers to suppliers and external education and training institutions.**

Recommendation #33: In order to encourage a more efficient use of the nation's learning institutions and allow access to training and development for all employers and individuals, the government, in conjunction with employers, should disseminate model practices and provide incentives for employers to offload the more generic kinds of training into external education and training institutions.

Public Policies

A comprehensive improvement in the quality of learning on the job will have to be driven by both private and public efforts. Clearly employers will have to make real commitments to making improvements. Not all employers can afford such commitments, however, unless federal and state governments offer some help.

Public strategies to encourage employers' commitments to workplace learning should emphasize two complementary approaches. First, policies that will increase the demand for workplace learning are needed.

In the past, the nation has created similar policies to increase investments in technology. In the 1960s, to counteract a perceived underinvestment in machine capital, the government gave employers investment incentives in the form of depreciation allowances, reduced taxes on profits from investing in capital, and, eventually, investment tax credits. In the late 1970s, to encourage investment in R&D, the government again offered an investment tax credit. The same approach will be the keystone in any policy designed to build a high-quality workplace learning system.

Investment incentives that allow employers to share with the government the developmental and delivery costs of employer-provided learning would improve both the quantity and the quality of training in the workplace. Employers who already buy training would do more training in-house and would buy more training outside because the subsidy would reduce costs. A subsidy would also encourage employers and suppliers to provide job-related training. With investment incentives in hand, employers of all sizes could develop consortia to develop and deliver training, deliver training themselves, or contract with public or for-profit training suppliers. Employers already buy almost 40 percent of their training from outside sources,[91] but with investment incentives, small employers would likely increase the amount of training they purchase. Incentives would create a market that would encourage fruitful competition among the many and various training suppliers outside the workplace.

Policies to increase the overall amount of employer-based learning will not be enough by themselves, however. A complementary set of policies will be required to increase the quality of the training that is supplied. These supply-side policies should include grants to help training suppliers outside the workplace meet the expanded demand. Grants should be available to help pay the developmental costs of new training curricula and of forming linkages with employers.

In addition, public funds should support efforts to improve the state of the art in employer-based learning. The nation's workplace learning system is scattered among myriad employers and training suppliers. No central institutions bring any coherence to the effort. Public funds need to be made available to inventory existing programs, evaluate them, disseminate models of best practices, conduct basic R&D, and encourage partnerships among employers and between employers and suppliers.

Investment Incentives for Employers

The most direct approach improving the quantity and quality of learning in the workplace would be to enact some form of tax incentive to encourage employer-based training.[92] The current tax system does not favor employer investments. Only a small proportion of employer spending for training can be treated as a business expense. Deductible expenses include travel costs and any materials or resources bought outside the employer institutions. In most employer training programs, those expendable items amount to no more than 15 percent of the total costs of training.[93] A tax-based investment incentive—a training tax credit—would encourage responsive adaptation to economic and technological change by putting investment in human resources on a more equal footing with investment in machines.

Using human resources as a competitive resource decreases the likelihood of allowing technological investment alone to drive competitive strategies. An investment strategy that relies on technology alone tends to encourage dislocation and to result in insufficient numbers of people who are trained to use the new technology that is adopted. But if training investments are apparent, employers are less apt to fire employees during downturns or periods of economic and technological change, because firing means the loss of a training investment.

Some people might criticize the notion of a tax incentive for employer-based training because they believe the credit would simply result in substituting formal training for informal training that already occurs. There are, however, several very good reasons for shifting from informal to formal training. Much informal on-the-job training is ineffective, inefficient, and unfairly distributed because of its informality.

Moreover, a tax incentive for employer-based training would have important indirect effects that would ultimately improve the state of the art in workplace learning. Currently, the human resource function is a relatively weak political institution inside the workplace; a tax credit would give power to human resource professionals. In addition, the external authority of a tax credit would increase the visibility and strategic role of training in those institutions. Finally, a tax credit would provide a rallying point for the human resource development community, encouraging professionalism and state-of-the-art improvements in workplace learning.

The current structure of employer-based training is highly decentralized and fractionalized in most employer institutions throughout the nation. There is no regulation, legislation, or institution that focuses on the state of the art in employer-based training. An employer tax credit for training would encourage the nation's employers to enter into a dialog with the government over the accounting and programmatic issues associated with the tax incentive. Once the employer community began to focus on training, the possibilities for sharing and improving the state of the art in workplace learning would be greatly enhanced.

A tax incentive would also enhance the status of training in individual employer institutions. Employers would discover how much training they were doing, and once they understood how much they were spending, they would be more interested in evaluating and improving training effectiveness.

By encouraging the evaluation of programmatic effectiveness, the tax incentive would improve the art of training over time. Moreover, a stronger and more professional human resource development system in employer institutions would make it much easier for external education and training institutions to forge partnerships with employers. Over the past 20 years, educators and public job trainers have attempted to work with workplace training institutions but have had relatively little success, in part because neither the function nor the training and development profession in the workplace is sufficiently organized or empowered to make successful partnerships possible.

A better understanding of training and development in the workplace would help education and training providers outside the workplace to develop practices that complement learning on the job. Therefore, an investment incentive would create stronger linkages between learning on and off the job and encourage a more cohesive lifelong sequence for job-related learning.

Program Experience: Several tax subsidies for employment and employer-based training have been introduced in the past, with mixed success. The WIN program's tax credit, developed in 1971 as a tool for encouraging employers to hire welfare mothers, has been a dramatic failure. The credit was claimed by employers for no more than 50,000 persons in any one year. Over a two-year period, when 500,000 WIN recipients entered the labor market, only 88,000 credits were claimed.[94]

In contrast, the New Jobs Tax Credit (NJTC) of 1977, a $4 billion program not restricted to the disadvantaged, had some positive results but did not become widely known in the employer community before being replaced by the Targeted Jobs Tax Credit (TJTC) of 1978. TJTC was established as part of President Jimmy Carter's Private Sector Initiative Program and returned to a highly targeted approach aimed primarily at assistance to the poor. TJTC has been extended and amended several times since 1978, most recently by the Technical Corrections and Miscellaneous Revenue Act of 1988, which extends authorization of the program through December 31, 1989.

Like the WIN credit before it, TJTC has been used almost exclusively to subsidize low-skilled jobs. Under the 1988 amendments, for each eligible employee hired, employers receive a tax credit equal to 40 percent of the annual wages paid during the first year of employment up to a maximum earnings level of $6,000, or a $2,400 credit. For the summer youth program, employers may receive credit equal to 40 percent (down from 85 percent before the 1988 amendments) of the first $3,000 in wages, for a maximum credit of $2,500. The law also adds a minimum employment period of 90 days or 120 hours before an employer can claim the credit for hiring a targeted individual except in the case of summer youth employees whose minimum period is 14 days or 20 hours.

Persons eligible for the program now include recipients of Supplemental Security Income (SSI), those who received more than 30 days of general welfare assistance, handicapped persons referred by vocational rehabilitation agencies, economically disadvantaged youths between the ages of 18 and 22, economically disadvantaged Vietnam-era veterans, cooperative education students, and economically disadvantaged ex-offenders. Eligibility for the program must be certified by designated local agencies, such as the Employment Service, which issues vouchers to participants.

Initially, 25 percent of the recipients were registered after they were already on the job, but changes in the program made in 1983 prohibited retroactive eligibility certification. Those changes also expanded the program to include economically disadvantaged youth in need of summer jobs, AFDC recipients, and WIN registrants formerly served by the WIN tax credit, and limited the eligibility of cooperative education students to those who are disadvantaged.

Since the inception of the TJTC program, the challenge has been to encourage employers to participate. The number of job credit vouchers issued in 1987 (the latest full-year data available) was 1.2 million, with only 598,200 (around 50 percent) of the certifications claimed by employers.[95] The Congressional Budget Office estimated that in 1984 vouchers were used by about 10 percent of employers, who claimed the credit for fewer than 10 percent of the eligible workers they hired.

Several problems have been identified as contributing to weak employer participation in TJTC. Some are reluctant to participate because the tax benefit is small, and businesses with little or no tax liabilities from which to deduct the credit therefore receive no benefit. Also, it appears that many certified eligible workers are unwilling to identify themselves to employers because of the stigma attached—many employers view those people as "undesirable employees" who would not perform adequately if they were hired. In one experiment, people who presented their vouchers were ultimately less successful in securing jobs than those who did not.

Most participating employers tend to have large numbers of employees, high turnover, high new-hire rates, and an unskilled, usually nonunion, labor force. They usually pay low wages and are likely to be part of chains or other multiestablishment corporations. Finally, they frequently have experience in dealing with government agencies and are not frightened by the red tape involved. Fast food and hotel chains appear to be major users of the credit.

The program also has administrative problems, including lack of funding and personnel. States vary widely in the proportion of eligibles who are certified, indicating the unevenness of administration nationwide.

Bishop has recommended some changes that would improve the program's cost-effectiveness and utilization by employers. Substituting "low-income unemployed adult" (over age 25) category for the more stigmatizing AFDC, General Assistance, SSI, ex-convict, and Vietnam veteran classifications is one suggestion. Others include protecting employers from the danger of being sued for giving hiring preference to TJTC eligibles, reducing the first-year tax credit from 50 percent to 25 percent for adults and from 85 percent to 50 percent for disadvantaged youths, adding a $4,000 subsidy for training costs, and increasing administrative efficiency through incentive payments to local Employment Service offices and outreach programs targeted to firms that might hire large numbers of TJTC eligibles.[96] (As noted earlier, the 1988 amendments to TJTC reduced the percentage of earnings allowed as a credit for both youth and adults and eliminated entirely a second-year credit for adults, but Bishop's other recommendations are still pertinent.)

In sharp contrast to TJTC, New Jobs Tax Credit (NJTC), which preceded it and did not target hiring subsidies for the disadvantaged, was much more heavily used by employers even though its one-year life prevented wide exposure in the employer community. It was also "marginal," applying only to additional employment, and therefore was potentially more cost-effective. The credit amounted to 50 percent of the increase in each employers' wage cost above 102 percent of the previous year's wage bill. The base for the credit was the amount of wages subject to Federal Unemployment Tax Act (FUTA) contributions up to the 1977 statutory limit of $4,200 per worker, so the maximum credit was $2,100 per worker. To prevent substitution of lower-paid or part-time workers for existing workers with higher annual earnings, the credit was further limited to 50 percent of the increase in total wage and salary payments over 105 percent of those for the previous year. Credit limitations for each individual employer were $100,000 or 25 percent of the total of current compensation up to $4,200 per employee. In practice, that limited the credit to up to 48 employees earning $4,200 or more per employer.

There was no widespread promotion of the NJTC program, and a survey conducted for the Department of Labor by the Bureau of the Census found that only about a third of the employers responding were aware of the credit in February 1978. Another survey conducted by the National Federation of Independent Businesses found that only half of small firms responding knew of the availability of the credit as late as April 1978, when their 1977 tax returns were being prepared.

Nevertheless, in contrast to the current Targeted Jobs Tax Credit, NJTC was widely used. The Department of the Treasury reported that firms claimed $1.5 billion in tax credits and created 1.1 million jobs in 1978 by using NJTC, whereas in 1979 (the first partial year of program activity), fewer than 25,000 companies made use of TJTC and, in 1980, certifications by the Employment Service totaled no more than 306,000 for the entire United States. Subsequent analyses suggest that 300,000 to 700,000 of the new hires under NJTC were people who would not have been hired otherwise. The net cost to government for each new job was about $2,600 to $4,400 per new hire, which compares favorably with all other forms of job creation.[97]

The estimated effects of NJTC are surprising not only because of the lack of awareness of its availability among employers, but also because the high base of 102 percent of previous employment made many businesses, especially during a recessionary period, unable to reach the threshold for the credit. The ceiling of $100,000 (or 48 additional full-credit employees) also may have decreased availability to large, rapidly growing firms that might otherwise have made use of the credit.

In summary, the nation's experience with tax credit programs shows that full benefit from those programs depends on careful formulation and avoidance of provisions that undermine acceptance among employers and employees.

Criticisms: Critics of employer tax credit programs frequently point to their "windfall" nature, particularly for firms that might have hired and trained the same employees without the tax credit. In fact, however, the windfall is probably less for a marginal wage or training subsidy than for other forms of job creation. The cost-sharing implicit in a marginal subsidy discourages unnecessary hiring. Moreover, adjusting the historical base that triggers the subsidy can curb the windfall that might result from subsidies for employees who would have been hired anyway. NJTC, for example, could have used 104 rather than 102 percent of the prior year's wage bill as the threshold for eligibility.

Even so, some windfall is inevitable in any incentive strategy that uses the carrot of subsidy rather than the stick of direction and regulation. The government already tolerates many such windfalls in its economic policies, because they are an inefficiency the nation is willing to tolerate in its capital subsidies. For instance, R&D tax credits, investment tax credits, and depreciation allowances all pay for substantial amounts of plant and equipment that would have been procured anyway.

The question of whether it is better to deliver such incentives through appropriated programs or through the tax code remains. The tax credit is the principal device for providing incentives for employers. It is popular because it allows individual and institutional choice about participation. Tax-based delivery systems are also flexible; program levels and appropriations need not be established before the actual use of a tax incentive, and use can vary over time without changing the system. Tax programs are generally regarded as cheaper to operate than appropriated programs, although administrative and compliance costs are often vastly underestimated.

One of the greatest difficulties associated with tax-based employment training subsidies is attracting employers to the programs. Firms that pay no taxes, of course, cannot participate in a subsidy program at all, and employers that pay little tax have little incentive to participate. Frequently, these are the very small businesses that could supply many of the new jobs that are needed.

A *refundable* tax credit resolves much of the problem. Even refundability, however, would not open participation to private not-for-profit and public employers. Because almost one in every three American jobs is paid for with public or not-for-profit funds, participation of such firms would expand the range of a subsidy program greatly and would be desirable. In sum, if a wage or training subsidy is to reach all major employers, it would have to be refundable and include an appropriated element in the form of a training voucher.

Advantages: Marginal wage and training subsidies are the best way to create jobs and encourage training because they are the least expensive. The most expensive strategy is general expansion. It has been estimated that in 1978, at least $44,500 of general spending increases or tax cuts was required to create a single job. Tax cuts targeted on investment rather than consumption create even fewer jobs. Costs vary tremendously among more specialized job-creation strategies. A job created through expansion and public works spending costs as much as $30,000. Public service jobs can cost up to $9,000. An untargeted wage or training subsidy that pays only part of hiring costs, however, costs somewhere between $3,000 and $8,000 per new job.[98]

Marginal wage and training subsidies could also be constructed to maintain jobs for employees threatened with dislocation. Subsidies allowed during downturns could maintain employment at reduced prices. The cost of wage subsidies to sustain employment would be offset by savings in unemployment insurance and revenue recaptured through taxable wages. Output would be generated at lower prices, thereby reducing the burden on macroeconomic restraint.

In addition, a marginal subsidy would require an employer's contribution, which would encourage continued employment only for workers the company truly intends to keep over the long term. Employees would be maintained in real jobs as opposed, for instance, to make-work jobs that have little positive impact on productivity and prices. In addition, keeping employees in the work setting gives them the opportunity to use their skills and even increase them if slack time is used for on-the-job training.

Design Issues for Employer Training Incentives

The targeting of eligibility for an employer-based training incentive is a major issue. The appropriate target population depends on the goal of the incentive. If the goal is to promote the competitiveness of American institutions, then targeting ought to be minimized, as has been the case historically in programs of this kind. In the early 1960s, the incentives for investment in machine capital did not target beneficiaries among the employer population. Legislators did not care that well-heeled engineers got to use expensive machinery paid for in part by public contributions. The purpose was to improve overall productivity, not to redistribute earnings potential among employees.

Experience with the TJTC and the NJTC demonstrates that employers are willing to accept public subsidies as long as the subsidies do not interfere with their strategic goals. Reducing hiring costs will encourage more hiring and reducing training costs will encourage more training, but only if hiring and training are viewed as effective means toward the accomplishment of strategic goals in the first place, and only if the employer decides whom to hire and train.

Minimal targeting, however, does not mean no targeting. Indeed, some degree of targeting is possible and advisable. For instance, if the goal were to build a more equitable training system, training could be subsidized for workers other than the white-collar and technical elites who get the most training now. Policy makers should recognize, however, that training incentives targeted on nonsupervisory workers may trade some efficiency for equity. One could argue—and the current distribution of employer-based training seems to support the argument—that training produces the highest payoffs among white-collar and technical elites, who have the most educational preparation and the greatest control in employer institutions. Nevertheless, a training incentive could be targeted on nonsupervisory personnel. Some training already occurs among those workers, and employers would respond to an incentive because nonsupervisory personnel are becoming ever more important to efficiency, quality, and the development of new applications for existing products and services.

Alternatively, public policy makers could decide to target specific kinds of training. They could allow subsidies for training managers and supervisors but not executives. In the technical training area, policy makers could decide to exclude technical elites and allow subsidies for training technicians, technologists, and craft and skill employees.

What kind of employer-based training activities should be subsidized? One can make a good case for subsidizing development. Proper development of training is the single best guarantor of effective training and should be encouraged, especially given its high cost. Training delivery could also be subsidized. A minimum-investment incentive could focus on the direct costs of delivery. Subsidies limited to direct costs would exclude any subsidy to overhead and the wage costs of trainees, which represent as much as two-thirds the full cost of training. The rationale would be to subsidize only the actual costs of the learning experience itself, including the costs of the trainer as well as the use of the facility, equipment, and materials. Subsidies to overhead might bias the choice of delivery toward internal provision as opposed to external providers. Subsidies to wage costs might encourage employers to train off the worksite.

The one direct cost that ought to be excluded is that of transportation. Employers should be encouraged to develop training methods for the workplace rather than to ship trainees off-site. Excluding overhead, wage costs of trainees, and travel would also give subsidies a bias toward training equity—training overhead and travel tend to be characteristic of employer training efforts for managerial and technical elites. In addition, employers would be given the wrong incentive to train higher-salaried employees if some portion of the wage costs of trainees were subsidized.

A training subsidy that focused on the total costs of development and the direct costs of delivery would provide more powerful incentives for development than delivery. Assuming a 20-percent tax credit, the subsidy to the development of the $215,000 computer-based program in Table 6 would be $43,000. The subsidy to a training program that cost $600 per day in total costs but only $175 per day in direct costs ($250 minus a 20-percent average transportation cost) would be $35 per trainee day. The subsidy is a sensible approach—once training has been developed, it is likely to be used with a minimum of subsidy to direct costs. Moreover, the limitation on the amount of subsidy to overhead and wages should encourage the more generic kinds of training that rely less on current employer overhead. Finally, the encouragement of more generic kinds of learning should encourage stronger linkages between employers and external education and training institutions.

Another issue is the size of the subsidy itself. Purists would argue that the public sector should pay the full cost of the public benefit and the employer should pay for the full cost of the private benefit. It follows that if the society and the employer split the benefits to training nearly evenly (as in the case of employer spending for R&D), then the public ought to subsidize half the costs.[99] Subsidies for development ought to leverage delivery. In addition, as argued above, excluding overhead and wages from costs will encourage more generic kinds of training, encourage employers to link with outside suppliers, and encourage more training of nonsupervisory personnel. Moreover, a large subsidy is not necessary to focus employer attention on job-related learning. Employers would pay attention to such learning anyway, because it results in quality improvements.

Accountability is another issue in the development of an incentive for employer-based training. The market discipline inherent in a marginal subsidy should solve the problem. The training subsidy would apply only to new training over and above what the employer is already doing. Also, subsidizing a minority of the costs to employers would help ensure wise use of the money. It is doubtful that a public subsidy would exceed 20 percent of the total costs of new training to employers, and only a foolish employer would pay 80 cents to get 20 cents from the government.

Ultimately, the major questions surrounding the advisability of an employer investment incentive for training center on its effects on the overall quantity and quality of training. Evidence suggests that the R&D tax credit's effect was "unitary"—a one-percent increase in the incentive resulted in a one-percent increase in corporate spending for R&D. Therefore, it is reasonable to expect that a tax credit for 20 percent of new training expenses would result in a 20-percent increase in employer spending for formal training. The current cost of formal employer-based training, $30 billion, would increase by $6 billion. If the available evidence on R&D spending is a good yardstick, then the benefits to individuals and the society as a whole from that additional spending would be two to four times as high as the benefits to employers. Moreover, it would cost the government only $600 million in lost revenues to leverage $6 billion in new employer spending for human resource development.

Recommendation #34: The centerpiece of any strategy to improve the quality of work-related learning must be investment incentives to increase the standing of learning in the American workplace. They should be delivered as tax-based investment incentives providing partial subsidies for the developmental and delivery costs of training.

Investment Incentives for Employees

Incentives for employers to sponsor training will not be enough. As with capital, machine, and R&D investment incentives, the principal purpose of an employer-based training subsidy is to improve employers' performance, but many employers may decide not to take advantage of it. In addition, the kind and quality of training offered will suit employers' needs and not necessarily employees' career development goals. Moreover, as product and service markets are becoming increasingly decentralized and temporary, the basic commitment between employer and employee is declining. As explained previously, many employers have already decided to react to fluid markets and climbing costs of benefits by creating a dual labor force. Job security and training commitments are made to one group of employees while contractors and part-timers are used according to expanding and contracting product or service demands.

As a result of the declining commitment between individual employers and employees, employees are becoming more and more responsible for their own career development and employment security. That emerging reality is not without profound political and financial repercussions. As job security declines, American workers are demanding the tools that will allow them to make successful career transitions while protecting their families. In the political domain, there is increasing talk about portable pensions, day-care, parental-leave, and training. At the moment, the public treasury is bankrupt, and there is growing pressure to pay for those new benefits with tax increases and by mandating that employers provide benefits. The irony is that if employers are asked to shoulder more health-care, pension, day-care, parental-leave, and training costs for workers, employment costs will go up, and employers will be forced to reduce the number of full-time workers.

In the past few years, as more attention has been focused on the need for continuing retraining to meet changing technological requirements, there has been a lively discussion of how employees might be encouraged to undertake training as a form of investment in their own careers. That approach is particularly relevant for general—not employer-specific—training, which many employers are reluctant to finance because employees can transfer their skills to competing firms. Among the strategies that have been proposed to encourage employee-initiated training are the Individual Training Account (ITA), training vouchers, and even the "training bank." Various forms of financial aid for tuition and fees at the postsecondary level and paid educational leaves (sabbaticals) have also been suggested.

The idea of the ITA, first proposed by economist Pat Choate of the TRW, Inc., is to establish a training account for each worker. Funds in the account would come from payroll deductions matched by the employer. They would accumulate over a period of time (Choate suggested six years) and would then become available to the worker if he or she were dislocated. If the worker never needed the funds, his or her share would be refunded at retirement (or to the estate upon death), and the firm would be refunded its own share. The ITA concept has been endorsed by the American Council on Education through the Business-Higher Education Forum, and variations on the theme have been proposed in Congress and tested in several states.[100]

In March 1984, Congressman Richard Durbin (D-Ill.) introduced in Congress a bill (HR 4832) that would have allowed workers to set up ITAs. Employers and employees would have contributed 0.8 percent of the employee's wages or $250 per year, whichever was less, up to a maximum amount of $4,000. The employer would have received a tax deduction of 125 percent of its contribution as an incentive to participate. The employee would have received a 100 percent deduction.[101]

Illinois has attempted to test the ITA concept. In 1985, the Illinois General Assembly established the Prairie State 2000 Authority to study the feasibility of a state-sponsored ITA financed through the voluntary contributions of employers and workers. The Prairie State study found that an ITA program "is desirable as a matter of public policy and that manifestations of it are feasible from the standpoints of market sentiment and technical management."[102]

Nevertheless, a number of constraints and drawbacks to such a program were also noted in the study:

- The program is useful only to workers whose employment is disrupted. Workers who simply want to prepare for another career or upgrade their skills are not eligible.
- ITA coverage funded for full-time employees is not useful to part-time, contract, or temporary workers. Extending ITA coverage to all workers would greatly expand administrative costs.
- Some businesses and workers may not participate in a voluntary program, leaving some people without coverage when the need for retraining arises. Further, workers who join the program would probably be those who could afford it best or are most motivated, so that those who are not covered may actually be the workers most in need of assistance.
- ITAs are not the sole form of assistance needed in

times of high unemployment. Indeed, closures of large plants might overwhelm such a system. ITAs should, therefore, be only one of several policy tools and funding methods available to combat unemployment.

Other analyses of the ITA concept have pointed out that the voluntary nature of the program does little to address the access issue in retraining. Workers with high levels of education are most likely to attend corporate education and training programs and would be likely to participate in ITA programs, too. Low-skilled, older, and less-educated workers, who are most likely to become displaced, would be less likely to participate. Workers in the secondary labor market, who do not value education as a vehicle for advancement, and who are subject to more spells of unemployment, are unlikely to benefit from a voluntary ITA, even though they have the greatest need and have probably been underserved by education and training programs in the past.[103]

For all of those reasons, the Prairie State 2000 Authority's study called for other strategies besides the ITA, particularly early-intervention strategies emphasizing job placement.

A second strategy for encouraging employee-initiated training is to supply unemployed workers with vouchers to use for retraining and related job assistance. Money for such programs may come from contributions into voluntary employees' beneficiary associations and special funds established under union contracts. Members of the United Auto Workers and major automobile manufacturers have joined to establish several well-known programs of the latter type. Similar programs have also been negotiated between the Communications Workers of America and AT&T.[104]

Most of the strategies already described are aimed at serving the needs of *unemployed* workers. A worker who continues to be employed, must usually pay for training or additional education without any tax incentive aside from that in the current tax code, which is limited. Some recent collective bargaining arrangements, however, have expanded to include retraining of *active* workers in both occupational and more general skills. Pathways to the Future, a three-year, $7.6 million model program, bargained in 1986 by US West Communications and the Communications Workers of America is designed to assist more than 28,000 management and nonmanagement *active* employees in a seven-state region. Participants receive tuition and fees for coursework and career counseling assistance.[105] The UAW/Ford and similar bargaining agreements are expanding in this direction, as well. Other strategies, modeled on some European programs, have also been proposed that would be more widely available to all workers regardless of employment status.

One is the "training bank" concept endorsed by economists such as Belle Sawhill of the Urban Institute, Martin Meyerson and Robert Zemsky from the Higher Education Finance Institute of the University of Pennsylvania, and Malcolm Lovell of the Brookings Institution. As suggested by Sawhill, for example, a "human resource investment account" would allow experienced workers to engage in on-the-job training and classroom instruction throughout their work lives. The account would be financed through payroll taxes that could be levied on employees, employers, or both.[106]

Meyerson and Zemsky suggested that funds from the training bank be used to provide two years of training beyond the high school level to workers who had at least five years of work experience and were prepared to pay part of the cost themselves. Training would be provided through both the private and public sectors, at colleges, universities, private proprietary schools, and employer-sponsored training programs. Employers would pay most of the cost of employer-sponsored programs.

Employees could use as much of the training allotment as desired through the age of retirement. There would be a cap on training costs, although Meyerson and Zemsky stated that expected costs might reach as high as $5 billion per year, perhaps funded by a percentage tax on gross earnings. Another possibility would be a fund to use both general tax revenues and a special tax on business.[107]

Lovell proposed a national worker training trust fund financed by a one-cent-per-hour-payroll tax levied on both employers and employees, with an expected yield of $3 billion to $4 billion annually. The fund would support training, job-search assistance, and income maintenance.[108]

Some states have already experimented with training trust funds of this kind. For example, legislation to establish a worker training trust fund was enacted in Delaware in 1984, with the support of the state's Chamber of Commerce and most employers. The law required a 0.1-percent increase in the existing unemployment tax rate paid by employers. The funds are administered by the state's Private Industry Council. Variations on that pattern have also been put in place in several other states, including California and Massachusetts.[109]

One of the appeals of training trust funds is that they send a public message to workers and employers that retraining is a worthwhile endeavor. In addition, such plans offer wider coverage and greater equity than union-specific or voluntary employer approaches.

More direct assistance for adults interested in retraining or upgrading their skills could be in the form of financial aid for postsecondary education. In contrast to other aspects of educational support, the federal government dominates financial aid to students. Such aid is in principle not age-specific, although in practice, federal student aid programs are biased against adults, particularly those who have already entered the work force. Grant, loan, and work programs authorized under Title IV of the Higher Education Act were designed to support full-time, traditional college students, rather than older students who might seek part-time learning not aimed at a formal degree. Both federal and state aid programs usually limit eligibility to students who participate on more than a half-time basis. Aid requirements are also biased toward financially dependent students rather than adults with major financial assets, even though attending school full-time would preclude work in most regular jobs.

Other biases against adult workers in existing student aid programs include the time frames of eligibility, which are geared toward the traditional four-year degree, and requirements that funds be spent in "eligible institutions," primarily two-year or four-year public or private colleges and universities. Because of the time constraints, part-time adult students may lose eligibility before completing a program of instruction. In addition, some of the nontraditional educational delivery systems they might prefer (weekend colleges, television instruction, correspondence courses) are not eligible for aid. Many aid programs are restricted to individuals enrolled in formal degree or certificate paths.

Finally, existing financial aid systems may not be helpful for dislocated workers because eligibility usually depends on family income and assets of the previous year. Displaced workers who have had high or moderate earnings in the prior year or who have homes or other capital assets of value would have difficulty qualifying for most student aid programs.

Although it is possible to suggest that student aid programs financed by the federal government be revised to include adults on an equal footing with college-age students, such a step would require major changes in existing federal legislation and would probably increase demand to the point that either appropriations would need to increase dramatically or the average level of support for the recipients would decrease. It is unlikely that such a major change would be acceptable politically, especially in light of the budget deficit.

Separate aid programs for adult students, including those who attend school part-time, are another possibility. For example, some have proposed guaranteed loan funds sufficient to pay for any form of education or skill training that is available through accredited academic or vocational training institutions. Repayment would be calculated as a percentage of gross income earned after the completion of training. That requirement would act as an incentive for workers with moderate to high gross income to use their own funds rather than those of the loan program to finance their training.[110]

Sabbaticals, or paid educational leave, are another form of assistance that could be made available to adult workers who could not combine work and training and could not otherwise afford to stop working to participate in training. Leave of that kind would guarantee all fringe benefits and protection of job rights.

Although employers sometimes grant educational leave to valued employees, most employers are unwilling to take on the expense unless the return to them is clear. Universities, for example, have a long tradition of sabbaticals so professors can take additional academic courses or participate in research or other professional enhancement activities. Some large and well-financed companies also provide such opportunities. For example, the Kimberly-Clark Corporation grants extended educational leave to employees for periods of two weeks to one year. Employees on leave receive full pay and benefits and may use corporate education funds to subsidize educational costs.

In the United States, paid educational leave is most often directed toward higher-level employees, although in Canada, universal paid educational leave for the work force has been proposed. A report by the National Advisory Panel on Skill Development Leave to the Canadian Minister of Employment and Immigration advocates such leave and suggests that the costs be funded through new surtaxes on personal and corporate income.[111]

Recommendation #35: Federal and state governments should experiment with a mix of loans and grants paid for by dedicated taxes and made available to individuals for skill improvements.

A Supply-Side Strategy

Strategies that increase the demand for training by providing investment incentives for employers and direct subsidies for individuals will not suffice. Those policies will improve demand for training, but additional policies will be needed to improve the quality of training supplied to employers and individuals.

One way to improve the quality of workplace learning without expensive subsidies is through R&D. Very little R&D is done on workplace learning. Although the federal government spends more than $140 million on education research, almost nothing is spent investigating training theory and practices. Moreover, because the training establishment is so large and decentralized, there are no institutions that attempt to husband and advance the state of the art.

Recommendation #36: Public and private institutions should establish infrastructure to conduct R&D; to inventory, analyze, evaluate, and model best practices in job-related learning; and to disseminate results to employer institutions.

Although the major responsibility for adult training and retraining rests with employers and employees, other actors and intermediary institutions such as postsecondary schools and federal and state governments also play a role in the process. As previously mentioned, 12 percent of Americans claim they received some or all of their upgrading outside the workplace. In addition, employers buy almost 40 percent of their upgrading from external institutions, mostly from the schools.

As noted earlier, postsecondary education institutions, such as community colleges, universities, vocational education institutes, and proprietary schools offer courses in new occupational skills, although in the United States the responsibility for searching out these opportunities rests with the individual.

Of particular importance for many adult workers are community colleges, which have proven to be very flexible in accommodating both local businesses and adult students who are employed during the day. Community colleges frequently design courses to meet the specific needs of local employers; they schedule evening and weekend courses to accommodate working adults; and they develop nondegree and certificate courses tied to existing local employment opportunities.

Four-year colleges and universities are attempting to follow suit by offering more courses of interest to adults who cannot commit to a four-year degree program. These schools also have begun to offer more evening and weekend classes. Vocational institutions and private proprietary schools have long sought adult students interested in gaining new skills or upgrading previously acquired knowledge. They also play an important part in providing the necessary training for experienced workers interested in changing occupations. In addition, unions, professional associations, trade associations, and for-profit schools are all important suppliers of job-related learning.

Recommendation #37: The demand-side approach to improving opportunities for job-related training should be accompanied by a supply-side strategy that would increase the institutional capability of suppliers to provide high-quality training to employers and employees.

Since the 1960s, efforts by the federal government to assist adult workers through retraining programs have focused primarily on displaced workers who have lost their jobs as the result of foreign competition, changing technology, and other disruptive forces in the economy. The ARA provided training to workers in economically underdeveloped areas such as Appalachia as a means of attracting new businesses to those regions. The original MDTA program, enacted in 1962, targeted adult workers who had at least three years of employment experience and had lost their jobs because of technological change. The Skill Training Improvement Program, enacted during the Carter Administration, reflected some recognition that adult workers might need upgrading of skills, although funding for the program was not large. Under CETA, Title II-C authorized upgrading and retraining, although reporting never differentiated Title II-C programs from Title II-B training programs for the economically disadvantaged, so little is known about the effectiveness of CETA upgrading and retraining activities.

A federal-state program that aids most unemployed workers is the Unemployment Insurance System. Workers who have been laid off may claim compensation for a period of weeks established by the federal government while they look for work. Federal law permits states to continue to provide compensation while recipients are enrolled in approved training programs, including JTPA, although many states discourage unemployed workers from participating in training.

With the exception of those programs and indirect aid for postsecondary schools and vocational education, the federal government has no planned effort to assist adults in either learning new skills or upgrading their existing skills.

In recent years, many state governments have taken on the responsibility for helping workers respond to employers' needs. In the main, their efforts have been prompted by the dual desire to expand economic development within state boundaries and to attract new industry, as well as improve the human capital of residents.

One form of state support for training institutions involves employer-specific skill training (ESST), sometimes called customized training. Many states have adopted customized training strategies. Such programs are frequently associated with state economic development efforts aimed at attracting new firms and plants from outside the state, although many states are now beginning to refocus their efforts on job growth and retention within their boundaries. Significant numbers of states have adopted ESST programs, with a variety of organizational approaches and funding sources.[112]

Massachusetts: One well-known example of a state-initiated skill training program is The Bay State Skills Corporation (BSSC), which completed its sixth year of operation in 1987.[113] BSSC has a broad mandate: "The Corporation shall encourage and facilitate the formation of cooperative relationships between business and industry, labor, government, and education to develop and expand programs of skills training that are consistent with employment needs. The Corporation shall provide grants-in-aid to education and training institutions, to be matched with private sector support, to fund skills training programs in growth occupational areas."

Although BSSC seeks out and encourages educational institutions to develop new courses and programs in response to employers' needs, it will fund such a venture only if the educational institution has identified one or more companies that will participate directly in the training. The Corporation requires that companies match BSSC funds with direct or in-kind support, including staff time and expertise, equipment and supplies, internships, or other contributions of value that will transfer corporate expertise into the educational setting.

The Corporation is structured as a quasi-public corporation, and its board of directors funds programs at least four times a year. In 1986-87, BSSC awarded $1,950,089 to 26 educational institutions to train 1,152 persons as part of its Industry Responsive Training programs, a 50-50 matching-grant venture. Other activities include funding a series of Special Institutes intended to provide the faculty of institutions of higher learning in Massachusetts the opportunity to acquire and exchange information in emerging and growth technologies, such as biotechnology, fiber optics, water-quality assessment, and telecommunications.

Two additional activities of the Corporation have been its support for the state's ET CHOICES programs, which provide skill training to recipients of AFDC and for the Massachusetts Displaced Homemaker Program. In FY 1987, BSSC funded 14 ET CHOICES programs and trained 335 individuals with grants of more than $812,000. Over its four years of participation in the program, BSSC has awarded almost $2.5 million to contractors who have served more than 1,200 welfare recipients.

Since 1979, when state funds were first appropriated, the Massachusetts Displaced Homemaker Program has grown into a statewide program called the Bay State Center for Displaced Homemakers, administered by BSSC. There are five geographic regions and 25 offices providing counseling, workshops, skills training, educational programs, and job placement assistance. In 1987, more than 1,600 participants were assisted at a cost of $898,162. BSSC has developed a Transitions program for 600 ET CHOICES registrants who also qualify for the Displaced Homemaker Program.

New York: Funding for New York's ESST[114] program is derived from several sources, including Vocational Education Act (VEA) funds for firm-specific training; JTPA eight-percent set-aside funds, also designated for firm-specific training; JTPA Title III Dislocated Worker funds; and state appropriations. Out of a total expenditure of $9.2 million for firm-specific training (not always tied to specific companies, despite the title) in FY 1985, federal funding was about 61 percent and state funding about 39 percent. Administrative costs drawn from JTPA and VEA federal funds accounted for an additional $1.3 million.

During FY 1985, 21,426 people were trained under ESST programs, compared with 11,106 in all other programs. Costs per trainee, which averaged $169, were lower than for other programs: $232 for VEA programs, $912 for JTPA eight-percent programs, and $1,145 under JTPA Title III. Employers are required to match dollar for dollar, which has taken the form of the employer continuing to pay wages while workers participate in training, instructors' salaries, equipment usage, materials and supplies, space, and funds from federal programs such as VEA and Title III.

Unlike the JTPA program, ESST is free of restrictions on the length of a program, the target population, and the type of training. Projects funded have involved large, established firms such as Eastman Kodak, Westinghouse, and Aetna Insurance, as well as small manufacturing and industry-specific consortia in the garment industry, nursing homes, hotels and motels, and minority-owned businesses. ESST has subsidized English-as-a-second-language courses for prospective taxi drivers and training in entrepreneurial and management skills for people interested in starting their own businesses. Training providers include local school districts and the State University of New York, although most training is provided through community colleges and regional vocational high schools.

Illinois: The Department of Commerce and Community Affairs is the lead agency for both economic development and training programs in Illinois. It has created a five-year development plan with detailed goals and policies for specific regions within the state. Illinois pools state appropriations and federal money into employer training packages that do not define particular trainee characteristics. That enables the state to place JTPA-eligibles without directly involving employers in the training system.

The Prairie State 2000 Authority established in Illinois in 1983 is an early example of a state project designed to establish training programs that foster job creation, reduced employer unemployment costs, and meet the needs of the economy for skilled workers by providing job-linked training for unemployment insurance claimants and potentially displaced workers who could become such claimants. Although originally established as a means of testing the operation of individual training accounts, the mission of the Authority was revised in 1985 when two programs were added. One program, the Individual Training Assistance Program, offers financial assistance to experienced UI-eligible workers who want to upgrade their current skills or acquire new ones. Both employed and unemployed workers are eligible for this program. The Employer Training Assistance Program makes grants or loans to eligible employers for the purposes of providing training to employees in fields with critical skill shortages. In FY 1988, the Authority issued 56 grants ($927,000) and 8 loans ($58,000) covering 9,735 workers.[115]

Alabama: Attracting new businesses from outside the state and attracting foreign investment are major goals of Alabama's employer-specific training. Recently, teams of university professors and students have been formed to analyze productivity barriers in particular firms and help overcome labor-management problems. Their analyses may lead to proposals for training to improve productivity.

South Carolina: Attracting new businesses is also a goal for employer-specific training in this state, but placing disadvantaged workers into on-the-job training slots has also been tried with some success. Universities in South Carolina are exploring how to establish productivity centers to provide technical assistance and training to small businesses. Managerial assistance may also be provided to small firms that may not be able to judge their own training needs.

Michigan: Michigan offers 11 employer-specific programs with at least four sources of funding. Community colleges have responded well to the available funds and are focusing on the training needs of local employers. Attracting new businesses is a central focus of the programs, but they are beginning also to focus on job retention, which has been supported by the creation of a new technology transfer service. In FY 1985–86, direct state general fund appropriations for ESST reached $12.3 million.

Indiana: Like Illinois, Indiana has centralized many of its economic development and training functions—in this case, within the Lieutenant Governor's office. Programs are distinctly employer driven, rather than social service oriented. The state puts general funds into two programs, the Basic Industry Retraining Program and Training for Profit, and also provides a direct dollar match for JTPA Title III funds. The state is working toward a proactive assistance policy for troubled firms and industries as opposed to the more reactive JTPA approach, which requires dislocation before funds can be allocated for retraining. In Indiana, vocational education has been taken from the Education Department and may be placed under the Lieutenant Governor. The Education Department is less involved in these programs, with the only link being the JTPA eight-percent funds.

California: One of the largest employer-specific training efforts in the nation is California's Employment and Training Panel (ETP), established by the state legislature in 1982. ETP is subsidized through a one-tenth of one percent tax on employer contributions to unemployment insurance. The tax was passed in return for a larger reduction in unemployment insurance taxes for employers and greater UI benefits for workers. Annual appropriations to the Panel by the state legislature have grown from $26 million in FY 1983 to more than $60 million in fiscal years 1986 through 1988. The program, which is intended to prevent unemployment through direct aid to employers, has widespread bipartisan support, even though it has helped some very large and wealthy companies, such as the Bank of America. ETP markets its services, but also relies on projects brought to it by employers.[116]

Delaware: A training tax similar to California's provides $2 million for Delaware's employer-specific training activities. The state economic development agency uses 25 percent of those funds for attracting new firms and aiding in-state expansions. The remainder of the money goes to the Delaware Private Industry Council, which can spend it on a variety of programs, including employer-specific training. The state education department is not closely tied to the program.

Missouri: Direct state appropriations support employer-specific training in Missouri—$2.6 million in 1986 and $6 million proposed for 1987. These funds go to the state education funds, along with the eight-percent JTPA funds. The pooling of JTPA and state monies is done to gain maximum leverage from all state funds and to permit more JTPA placements among employers, who are not made aware of the specific sources of funds. Local PICs are also required to apply 20 percent of their Title II-A money for customized training or on-the-job training. Efforts to move the training program under the Missouri Commerce Department, which also houses the Division of Manpower Planning, failed because of the strong objections of education officials. In Missouri, educational institutions are the main providers of employer-specific training. The training is targeted on Standard Industrial Codes with growth trends over a five-year period rather than on specific industries.

Conclusion: All the above state programs finance employer-specific training through direct general fund appropriations or dedicated taxes. The level of per capita effort varies widely, however. It is clear that the many efforts to promote training through state-assisted, employer-specific programs have proven successful.

Recommendation #38: The federal and state governments should encourage state and local experimentation with training programs intended to upgrade employees in the interest of their own career development and in the interest of improving the competitiveness of state and local employers.

Foreign Experience With Upgrading

Just as many European nations place more emphasis than the United States on employment preparation for young people, so those nations also stress the importance of retraining and upgrading for adult workers.[117] A review of their experience in that area could be instructive for the United States as it begins to explore ways to expand the investment of employers and employees in such training.

France

Since 1971, under French law, all employers with more than 10 employees are required to spend a percentage of their wage bill on employee training. Originally, the training requirement was set at 0.8 percent of the firm's total expenditure on wages, although that was subsequently raised to the 1.1-percent rate enforced since 1978. An additional 0.5-percent obligation is imposed in support of apprenticeship programs, so the total training obligation for each firm is currently 1.6 percent of wage expenditures.

The aim of the law is to induce firms to expand their training expenditures at least to the level established. If a firm fails to spend the established amount, however, it must forfeit the residual to the national treasury.

The law appears to have had the desired effect, increasing total training expenditures in all firms, but especially among small and medium-sized firms, which in the United States spend the least on training. Small and medium-sized firms with fewer than 50 workers doubled their training expenditures between 1972 and 1980, from about 0.5 percent to about one percent of their wage bill. The proportion of employees participating in some form of training has risen also, as has the per worker expenditure for that purpose. In 1979, French firms financed training for about 18 percent of all workers. Small and medium-sized firms trained about 1.8 percent of their workers in 1972 and about 4 percent in 1980.

The French system has not interfered with the freedom of firms to use their training resources in ways that they believe are most efficient. The French government does not try to control the workers selected for training, the means by which training is provided, or the type of training offered. Firms may concentrate on preventive training to reduce the risk of layoffs as the result of technological change, adaptation training to help workers fit into new jobs, or refresher training to maintain or upgrade skills.

One drawback to the system, however, is that French firms, like their counterparts in other countries, tend to offer training to more highly skilled workers than to those with less schooling, who might need training more. If the goal is to assist workers most likely to be laid off and not readily find reemployment, restrictions on eligibility for training might be needed. Similarly, more direction for the type of training offered might also be necessary to stress general, transferable skills instead of skills that are exclusively tied to the firm offering the training. A final concern in trying to transfer this kind of system to the United States is the fact that employers might resist the addition of another payroll tax, although the experience of California, Delaware, and other states indicates that taxes can be raised if employers support the objective.

Federal Republic of Germany

West Germany's adult training and retraining programs are administered by its Federal Employment Institute (FEI), which was given the responsibility to maintain national employment equilibrium under the Employment Promotion Act of 1969. Under this law, FEI can use such policy tools as training and retraining, job creation, and subsidized employment to help ease unemployment. FEI also oversees the unemployment compensation system, which uses payroll taxes to pay for both unemployment benefits and other labor market programs. In addition, European Economic Community funds are available to assist dislocated workers, particularly in the coal, steel, agriculture, and textile industries. About a quarter of all workers who received adult training or retraining in West Germany were subsidized by those European funds.

The need for adult training and retraining and the ability of workers to benefit from such training is affected by Germany's excellent apprenticeship system, which offers solid basic vocational skills to young people who do not go on to college. It is a dual system, offering both classroom instruction and on-the-job training with an employer. After three to four years in the apprenticeship system, workers are certified as fully qualified in one of the 450 occupations in which formal training is offered.

West Germany has an extensive adult training program that offers "further training" to upgrade skills in the occupation already held, "retraining" to help workers who want to move into new occupations, and "on-the-job training" to help workers achieve full efficiency in their current jobs. During the 1970s and 1980s, more than three-quarters of all trainees have sought further training, many of them working to pass state examinations for master's or technician's certification. The FEI has begun to place greater emphasis on updating and improving skills at a given occupation level, in order to upgrade the skills of workers who might otherwise become unemployed.

Since 1970, less than 15 percent of adult training enrollees have entered retraining programs to help them prepare for new occupations. Women represent a significant proportion of the enrollments. More than half the courses last for more than a year; in contrast, about a fourth of the further training courses last this long.

On-the-job training tends to be much shorter in duration, with more than 90 percent of the courses lasting six months or less. It has been provided to less than 10 percent of the people receiving FEI-supported training since 1970. Subsidies for such training are paid directly to employers who agree to provide vocational training to employees in order to increase their efficiency in their present jobs and improve overall productivity.

Originally, the West German adult retraining system was aimed at removing barriers to occupational mobility rather than preventing or alleviating unemployment. With rising unemployment in the 1970s, more applicants have been unemployed. They are often referred by local employment offices. The local offices are responsible for deciding whether to offer training, as well as whether to offer FEI support during training. People who complete training return to the local employment office for placement.

The FEI supports training through vouchers, commissioning special courses, and offering grants to training centers. A voucher includes training costs for approved courses, a living stipend (usually at the rate of unemployment benefits), and sometimes a moving allowance. Special courses may be commissioned when there are occupational shortages or special groups, such as the long-term unemployed, that need assistance in a particular region. Finally, in a few cases institutional grants may be offered to expand the training capacity of a community.

About three percent of West Germany's labor force receives some form of adult vocational training each year, and about one-third of the participants are subsidized under the Federal Employment Act. About 20 percent are unemployed workers. Most participants appear to be male, skilled, and 20 to 45 years old. Women account for about a third of all persons receiving training. Completion rates are high (over 90 percent), with most dropouts suffering from major educational deficiencies. Placements are also high, with one study showing that 60 percent of people who entered further training between July 1979 and September 1980 were unemployed, but only seven percent were unemployed after completing the training.

Adult training is offered by a variety of semi-autonomous training institutions, and about half of it is privately supported. The Chambers of Commerce and Industry, crafts associations, blue-collar and white-collar unions, and the school system are the major institutions offering such training. Smaller providers may offer training in only one or two occupations and may not be tied to FEI programs.

Sweden

The traditional Swedish commitment to full employment is reflected in a labor market policy that calls for continual upgrading of workers' skills, improvement of employment opportunities for the relatively unskilled, and expansion of employment opportunities and training during recessions to prevent unemployment or to improve the job prospects of unemployed people.

The commitment is evident in the central government's high rate of expenditures for those programs (approximately eight percent of the central government's total budget) and in the oversight of government agencies, including government-run training centers. The Swedish system is flexible and effective, able to shift courses in accordance with changing needs and offering both high-quality instruction and technically advanced course work. The system also provides remedial education as needed. Cooperation between business, government, and labor is good, and there is general agreement on both social and labor policies. Full employment is a central goal of all parties, and adult training and retraining is an important policy tool for achieving that goal.

The National Labor Market Board (AMS), an independent agency with a tripartite governing body representing labor, business, and government, administers Sweden's labor market programs and policies. Unions have a plurality of votes, but most decisions are unanimous. The AMS has regional and local offices, enabling it to tailor programs to the needs of individual communities.

There are two main types of training provided through AMS: the in-plant subsidy program that uses slack periods for worker education in order to prevent layoffs, and the job training program that assists workers who are unemployed, threatened by unemployment, or desirous of changing jobs. The in-plant subsidy program is popular and less expensive than paying unemployment benefits. It offers vocational training as well as courses in decision making and occupational health and safety. The job training program offers practical vocational skills, not professional training. The courses are usually the same as those offered in upper-level secondary schools, and participants tend to be persons who lack the education and skills needed in changing industries.

The Swedish Employment Service, part of the local

AMS office, decides whether individuals meet training qualifications. To be eligible, a person must be unemployed, hard to place, or in danger of becoming unemployed. No restrictions are placed on income or previous work experience. Applicants must be registered job seekers and generally 20 years or older, with the exception of people who are handicapped, foreign refugees, and parents with children to support. Training, including course materials, is free, and trainees receive a taxable stipend tied to the level of unemployment benefits.

Some AMS training is also provided to employed workers in order to prevent or eliminate occupational shortages. The objective of such "bottleneck training" is to prevent inflation created by labor shortages during periods of economic expansion.

The National Board of Education arranges courses at the request of AMS, which determines what kinds of courses are needed, their size, scope, and location. The Board administers and manages the training, with costs reimbursed through an AMS fund. Training is geared to job openings and job prospects reported by County Labor Market Boards and translated into an annual plan, which is subject to change during the year.

Generally, training is provided at 52 independent AMU (National Employment-Training Board) Centers located throughout Sweden, but some courses are offered at regular schools. Duration of courses ranges from 2 to 72 weeks; one-year courses are common and some take two years or longer. Approved curricula have been developed for about 400 occupations.

Although traditional instruction is offered, most students learn by themselves at their own pace, with the aid of self-testing materials, in settings modeled after the actual worksite. Instructors, who are required to have at least seven years of industrial experience, offer supervision as needed. Special programs are provided to physically, socially, and mentally handicapped persons and to immigrants. Individuals who lack the formal education needed to benefit from training are first placed in regular schools or may receive AMU remedial education before placement in vocational training courses.

In addition to the AMU-sponsored training, there are some privately financed and administered training programs in Sweden, along with company-funded in-plant training. The Employment Security Council, which represents the white-collar unions and the main employers' association, sometimes provides matching funds for company training of white-collar workers who need training not offered through the AMU and not in danger of layoffs.

The number of people engaged in Swedish labor market training peaked at 51,800 in 1979. About half of the trainees are women. Completion rates are high, and about 75 percent of course graduates are employed within six months, 70 percent at work for which they were trained. Evaluators agree that the Swedish system has achieved remarkable success in stabilizing employment and preventing unemployment, although the policies are more successful for persons already employed than for those who lack basic skills for entry into the labor market. Although some of the system's success is the result of factors peculiar to Sweden (the high degree of labor-management-government cooperation, for one), the overall result reflects a strong national commitment to make the full employment policy work. The major drawback is that such a policy is very expensive and requires a national willingness to commit a relatively large proportion of government funds.

Canada

Canadian labor market policies, including these regarding adult training and retraining, are similar to those operative in West Germany. The central government uses public policy to correct difficulties in the private market; government training programs are well-established and well-funded, with provisions for training stipends and other support services. Training centers are not, however, run by the federal government, which prefers to rely on local schools and companies such as training suppliers. Canadian labor programs are run by government ministries rather than a federal agency with representation from business, labor, and government, as is the case in Sweden and Germany.

The Canadian Ministry of Employment and Immigration administers industrial and institutional training programs. Industrial training is offered through programs that share costs with industry and through the newer Critical Skills Training Program adopted in 1982, which expands training opportunities in skilled occupations that have chronic labor shortages. For industrial training, the federal government negotiates a contract with one or more employers that agree to provide training in return for the government reimbursing a proportion of the training costs.

The Canada Manpower Training Program, established in 1967, was designed to help adults secure the skills they need for higher-paying jobs and to provide skilled labor to Canadian industry. The program is operated by the federal government in cooperation with the provinces and territories and is administered through local employment centers. Training is provided by educational institutions such as community colleges and vocational schools and by employers, with the government sharing training costs.

Institutional training is provided in provincial schools and community colleges. Aimed primarily at young workers, it offers preemployment skill training, language training (primarily for immigrants), basic skills development, job-readiness training, work-adjustment training, occupational orientation, and the classroom portion of apprenticeship training.

Changes were made in 1982 under the National Training Act because the older program was unable to train workers needed in new, technologically advanced industries. As in the older industrial program, training is provided by employers under contract to the government.

About 2.5 percent of Canada's labor force participated in government training programs during FY 1982-83. Completion rates and placement levels were high, with about 75 percent of all trainees in institutional and industrial training obtaining jobs upon completion. Only about half of those jobs were in fields for which the participants had been trained, however. It is expected that the newer Critical Skills programs will do a better job of matching training to job opportunities. These programs will, however, focus on well-educated young males, because the primary objective is enhancing national productivity rather than achieving social equity or reducing unemployment.

The Ministry of Employment and Immigration also provides a wide range of employment services in the form of vocational counseling, testing, job placement, and mobility grants offered through local employment centers.

Great Britain

Since 1975, Great Britain has experienced extremely high rates of unemployment, much higher than in the 1960s and early 1970s. Indeed, unemployment doubled from 1980 to 1981. Labor market policy, reflecting the country's concern for the problem, emphasizes employment schemes rather than training activities. The Temporary Short Time Working Compensation Scheme, the Job Release Scheme, Community Industry, the Community Enterprise Programme, and the Job Creation Programme are examples of special programs designed to make jobs available to entry-level workers and keep others from being laid off. Public training programs have been far less in evidence.

Labor market policy in Great Britain is currently under the direction of the Manpower Services Commission (MSC), established in 1974. Members of the MSC represent unions, employers, education, and local governments. The MSC develops an annual corporate plan setting forth its objectives and programs for the year. Activities of the MSC are divided between the employment service, which focuses on placement, and the training service, which is responsible for training about 75,000 persons each year, generally by contracting out white-collar training to local colleges.

There are three major difficulties associated with training programs in Great Britain: poor vocational preparation of many school dropouts, inadequate access to skill retraining for adults, and outdated apprenticeship systems that do not prepare participants for high-skill jobs. Overcoming those problems, with the assistance of industry and trade unions, is the MSC's central objective for the 1980s, although it faces formidable obstacles.

The major government-sponsored training effort is the Training for Skills Programme, which provides funds when an Industrial Training Board identifies a need in an industry's long-term training requirements. This program provides government grants to employers taking on apprentices or other long-term trainees above the normal recruitment level.

Japan

In contrast to most Western European governments, the Japanese government has a low level of involvement in most aspects of labor market policy, including adult training, which the private sector provides.

The Japanese government provides some support to the "lifetime employment system," run by large Japanese companies. The system affects only 25 percent of the work force, but these few are entitled to periodic training that upgrades their skills. During recessionary periods, the Japanese government occasionally offers these workers retraining assistance and wage subsidies to prevent layoffs.

About 75 percent of the workers in Japan are not covered by the lifetime employment system and receive no company benefits. They generally work for small or medium-sized employers or are contract workers for larger companies. These workers are the first to be laid off during economic downturns and are usually less skilled than their counterparts covered under the lifetime system. For these workers, a government-sponsored training system is available under a vocational training law enacted in 1958. Workers who apply for unemployment assistance must take part in training courses. The public vocational training system has not been very successful, however, because most trainees see their participation as a public humiliation. The courses are generally not of high quality.

Social and demographic trends have begun to weaken the lifetime employment system. As workers begin to find it more attractive to move from company to company, Japanese employers will begin to experience some of the same constraints as employers in the United States who are reluctant to invest in general training that can be transferred to other firms. Japan is trying to increase its public training programs to offset potential declines in private training, but the future of privately financed, company-sponsored on-the-job training programs is uncertain.

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